

THE MEDICAL JOURNAL OF AUSTRALIA

VOL. II.—48TH YEAR

SYDNEY, SATURDAY, DECEMBER 2, 1961

No. 23

Table of Contents

[The Whole of the Literary Matter in THE MEDICAL JOURNAL OF AUSTRALIA is Copyright.]

| ORIGINAL ARTICLES— | Page | BRITISH MEDICAL ASSOCIATION— | Page |
|---|------|---|------|
| Aspirin and Chronic Gastric Ulcer, by R. A. Douglas and E. D. Johnston | 893 | Queensland Branch: Annual Meeting | 914 |
| Some Random Reflections on Preventive Medicine, by D. A. Dowling | 897 | OUT OF THE PAST | 925 |
| Acute Pancreatitis and Histamine, by E. R. Trethewie | 899 | CORRESPONDENCE— | |
| REPORTS OF CASES— | | The Medical Benevolent Association of N.S.W.: Christmas Appeal | 925 |
| Hæmoglobin H Disease in a Papuan, by B. P. Ryan, A. L. Campbell and Peter Brain | 901 | National Health Week in Retrospect | 925 |
| Sickle-Cell Thalassaemia Disease in a Family with Inter-marriage of Siblings, by O. E. Budtz-Olsen, K. Bell, B. L. Hillcoat and R. L. G. Newcombe | 902 | The Australian Medical Association | 925 |
| Some Aspects of the Blind-Loop Syndrome, by Ian G. Llyall and Peter J. Parsons | 904 | POST-GRADUATE WORK— | |
| REVIEWS— | | Post-Graduate Committee in Medicine in the University of Sydney | 926 |
| Origins of Alcoholism | 907 | The Australian Post-Graduate Federation in Medicine | 927 |
| Assessment of the Activity of Disease | 908 | NOTES AND NEWS | 927 |
| The Person Symbol in Clinical Medicine | 908 | DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA | 927 |
| New Soviet Surgical Apparatus and Instruments and their Application | 908 | NOMINATIONS AND ELECTIONS | 928 |
| BOOKS RECEIVED | 908 | DEATHS | 928 |
| LEADING ARTICLES— | | DIARY FOR THE MONTH | 928 |
| Trials of Live Poliovirus Vaccines | 909 | MEDICAL APPOINTMENTS: IMPORTANT NOTICE | 928 |
| COMMENTS AND ABSTRACTS— | | EDITORIAL NOTICES | 928 |
| Leucotomy in England and Wales | 911 | | |
| WHO Malaria Stamp Campaign | 912 | | |
| Shorter Abstracts: Gynaecology and Obstetrics | 912 | | |

ASPIRIN AND CHRONIC GASTRIC ULCER.

By R. A. DOUGLAS, M.R.C.P. (Lond.), M.R.A.C.P.,
Physician, Townsville General Hospital, Townsville,

AND

E. D. JOHNSTON, D.D.R., M.C.R.A.,
Radiologist, Townsville General Hospital, Townsville.

THAT aspirin may injure the gastric mucosa has been recognized now for the past 22 years. The classical gastroscopic observations of Douthwaite and Lintott (1938) first drew attention to this phenomenon when they described small areas of hæmorrhage about aspirin tablets lying on the gastric mucosa. Objections to the validity of these observations were made by Paul (1943), but over the years observations relating gastric hæmorrhage to the ingestion of aspirin have become more numerous and more convincing.

Alvarez and Summerskill (1958), in a carefully controlled study, were able to determine a causal relationship between the recent consumption of salicylate and massive gastro-intestinal hæmorrhage in over 40% of 103 consecutive patients admitted to hospital with hæmatemesis and/or mælena associated with peptic ulcer. The lesion induced by salicylate was difficult to define, but the clinical history, together with findings at emergency partial

gastrectomy, indicated that acute erosions of the stomach, and possibly lower in the gastro-intestinal tract, were sometimes responsible, although activation of a preexisting chronic peptic ulcer often seemed likely. They also found that half the patients who took salicylates lost blood in their stools, these cases including cases of peptic ulcer, cases of dyspepsia with no radiological abnormality and controls.

Muir and Cossar (1959), amplifying their earlier work of 1955, concluded that of 106 patients admitted to hospital with gastro-duodenal hæmorrhage, 57 admitted to having taken aspirin within 48 hours of their initial bleeding. Of 106 patients without gastro-duodenal hæmorrhage 17 had taken aspirin in the 48 hours before admission. The patients who most commonly gave a history of taking aspirin before the hæmorrhage were those with acute gastric lesions (but no history of dyspepsia). Of the people whose hæmorrhage followed ingestion of aspirin, half knew that aspirin gave them indigestion.

Summerskill and Alvarez (1958) also describe "salicylate anæmia" due to occult bleeding from the gastro-intestinal tract associated with the habitual heavy consumption of salicylate compounds for headaches.

Hence there would seem to be little doubt that aspirin can produce acute erosions in the gastro-intestinal tract.

One of us has noticed over the past five years that a large number of patients suffering from chronic gastric ulcer gave a history of chronic relapsing headache when

questioned about this symptom as a routine part of their interrogation. These patients with headache then admitted to the taking of aspirin drugs, often in very large quantities, for the relief of their headaches. The headaches always antedated the appearance of gastric ulcer symptoms by a considerable time. The clinical triad of chronic relapsing headache, aspirin ingestion and chronic gastric ulcer became so commonly observed that it was wondered whether the taking of aspirin could be a causal factor in the production of chronic gastric ulcer. To settle this point the following investigation was carried out.

Investigation.

The investigation was confined to all cases of chronic gastric ulcer admitted to the Townsville General Hospital over the three-and-a-half-year period from July 1, 1956, to December 31, 1959. These ulcers were demonstrated by barium meal X-ray examination and/or operation. A chronic gastric ulcer is defined as a gastric ulcer having a history extending over three months or longer. During this period 77 patients suffering from chronic gastric ulcer were admitted to the hospital for treatment; 14 of these patients denied the taking of aspirin drugs. Of the non-aspirin takers 12 were males and two were females. Of the 14 non-aspirin takers two (both males) were taking known gastric irritants, one para-aminosalicylic acid for pulmonary tuberculosis and the other phenylbutazone for arthritis. In a further six patients (four males and two females) no information could be obtained as to whether or not aspirin drugs were being consumed (Table I).

The remaining 57 patients, 34 females and 23 males, all admitted to taking aspirin drugs either at personal interviews or in reply to a written questionnaire. Among these aspirin takers the average age of the females was 45 years, and of the males 55 years. The length of history of gastric pain varied from three months to 20 years, with an average length of history of 4.5 years. Medical treatment was used in 42 cases and surgical treatment in 15 cases. In the aspirin takers the consumption of aspirin in all cases antedated the appearance of pain due to the gastric ulcer and the drug was taken for conditions other than the ulcer pain, though later it was also taken in some cases to relieve the ulcer pain. In five cases no information was available as to the amount of aspirin taken. In the 52 cases in which the patients were able to supply this information, the average consumption of aspirin was four units a day. One unit is defined as one commercially packed dose of aspirin, either an aspirin tablet or an aspirin powder. The tablets or powders in the great majority of doses were of compound type, containing together with aspirin other ingredients such as phenacetin, caffeine and codeine. These other ingredients have been ignored for the purpose of the survey, as none of them has ever been described as causing gastric irritation. This means that in each of the 52 cases in which the amount of aspirin consumed was known, the average yearly consumption would be 1460 units of aspirin. One patient took between one and 100 units of aspirin per year; three took from 100 to 200 units; four took from 300 to 400 units; one took from 500 to 600 units and six took from 700 to 800 units per year. Twenty-two patients took from 1000 to 1500 units of aspirin per year and four took from 1500 to 2000 units. Four took from 2000 to 2500 units, three from 2500 units to 3000 units, one from 3000 to 4000 units and three from 4000 to 5000 units.

Of the 34 females, 23 were taking aspirin for headaches and seven as a stimulant, the latter probably for the effect of the caffeine contained in the compound tablets or powders. Backache, arthritis and a painful breast each accounted for one female and in one case the reason was unknown. Of the 23 males, 14 were taking aspirin for headaches, two as a stimulant, two for arthritis, one for backache, one for *tic douloureux*, one for duodenal ulcer and two for reasons unknown. Thus roughly 70% of the females and 60% of the males were taking aspirin for chronic headaches; this may be taken to represent a very large percentage of chronic headache sufferers among

patients with chronic gastric ulcer when it is remembered that 5% is the usually accepted incidence of chronic headache in most populations.

Forty-three patients were taking proprietary A.P.C. powders; of these 34 were taking brand A, five were taking brand B and four were taking both preparations. Five patients were taking proprietary aspirin tablets; of these one was taking brand C, three were taking brand D and one brand E. Three patients were taking proprietary A.P.C. tablets of unknown brand and six were taking both powders and tablets, five of unknown brands and the sixth of unknown type.

To determine the amount of aspirin consumed in the region roughly drained by the Townsville General Hospital, the major wholesale merchants in Townsville were asked to supply figures of the amount of aspirin drugs distributed by them in the six-months period from July 1, 1958, to December 31, 1958. The merchants willingly obliged and we have converted the amounts given by them into units of dose and multiplied by two to give the approximate yearly distribution. Firm A supplied 4,665,666 units; firm B supplied 2,438,496 units; firm C supplied 2,636,488 units; firm D supplied 2,720,544 units and firm E supplied 354,240. The total yearly distribution of aspirin drugs was thus approximately 12.8 million units in the region from which our gastric ulcer patients came to be admitted to hospital.

TABLE I.

Incidence of Aspirin and Other Gastric Irritant Ingestion among Chronic Gastric Ulcer Patients.

| | Males. | Females. | Total. |
|------------------------------------|--------|----------|--------|
| Total number of patients | 39 | 38 | 77 |
| Non-aspirin takers | 12 | 2 | 14 |
| Aspirin takers | 23 | 34 | 57 |
| Takers of other gastric irritants: | | | |
| Phenylbutazone | 1 | — | 1 |
| Para-aminosalicylic acid | 1 | — | 1 |
| No information obtained | 4 | 2 | 6 |

Assuming that the population supplied by these firms is somewhat less than half that of North Queensland and roughly the population which drains to the Townsville General Hospital, then a total population figure of 100,000 people would be a reasonable estimate. If it were also assumed that the consumption of aspirin drugs in people under the age of 20 years was negligible, then it can be assumed that approximately 60,000 people could be users of aspirin drugs. This gives an average yearly usage of 210 units of aspirin per year, as compared with the average yearly consumption of 1460 units of aspirin per year in the 52 cases of chronic gastric ulcer in which aspirin consumption was known. Thus it would seem that this type of chronic gastric ulcer patient consumes approximately seven times as much aspirin as the population at large.

In order to check on this figure, 200 people taken at random from the electoral roll of Townsville were sent circulars inquiring about their consumption of aspirin drugs. Only 99 of these people replied to the circular and the average consumption of aspirin drugs was 80 units per person per year. As only 50% of the people to whom questionnaires were sent replied, this figure probably has little validity, but this part of the investigation is mentioned for completeness and the dosage frequency distribution was as follows. Of the 99 people who replied to the questionnaire, 28 consumed up to 10 units per year; 40 consumed from 11 to 30 units per year; 15 consumed from 31 to 70 units; four people took from 71 to 100 units; six people took from 100 to 200 units; two people took from 200 to 600 units; one person took 700 units; one took 1000 units and two people took 2000 units of aspirin per year.

As a further check, 77 patients suffering from duodenal ulcer who were admitted to the Townsville General Hos-

TABLE II.
Sex, Age and Site Distribution of Gastric Ulcers in Present Series.

| Situation. | | Number of Patients. | | | | | | | | | Total. |
|--------------|----|---------------------|----|--------|--------------|----|--------|---------------------|----|--------|--------|
| | | Less than 40 Years. | | | 40-60 Years. | | | More than 60 Years. | | | |
| | | M. | F. | Total. | M. | F. | Total. | M. | F. | Total. | |
| Upper third | .. | 2 | 3 | 5 | 13 | 7 | 20 | 3 | 1 | 4 | 29 |
| Middle third | .. | 1 | 3 | 4 | 2 | 4 | 6 | 5 | 3 | 8 | 18 |
| Lower third | .. | 3 | 4 | 7 | 8 | 6 | 14 | 5 | 4 | 9 | 30 |
| Total | .. | 6 | 10 | 16 | 23 | 17 | 40 | 13 | 8 | 21 | 77 |

pital over the same period as the gastric ulcer survey were sent circulars inquiring about their consumption of aspirin drugs. Here again the results of the survey were most disappointing, as only 36 of these patients replied, giving an average per-capita consumption of 232 units of aspirin a year. Again this figure is not necessarily valid, because less than 50% of the patients replied to the circular.

Of the aspirin preparations which the gastric ulcer patient favoured, the distribution in sales for the 12·8 million units sold was as follows. Brand A powders had a distribution of 7,163,136 units and brand B powders had a distribution of 892,672 units. Brand C tablets had a distribution of 2,470,992 units, brand D tablets a distribution of 626,760 units and brand E tablets a distribution of 64,224 units. This makes a total of 11·2 million units, leaving 1·5 million units of the less popular brands not favoured by the gastric ulcer patients.

The Deputy Commonwealth Statistician and Government Statistician in the State of Queensland kindly agreed to comment on the statistical significance of the investigation and writes as follows:

In your sample of gastric ulcer patients, 57 out of 71 patients (excluding six about whom no information was available) took $4 \pm 0\cdot5$ units per day. (The rounded figure of 4 given by your original communication could denote consumption between 3·5 and 4·5 per day.) The average consumption for the whole sample was therefore:

$$(4 \pm 0\cdot5) \times \frac{57}{71} = 3\cdot2 \pm 0\cdot4 \text{ per day, or } 1,170 \pm 146 \text{ per year.}$$

Suppliers provided 12,815,434 units to an area with a total population of 100,000 persons. If we assume that persons under 30 years of age can be excluded as significant aspirin takers, then the population actually supplied was (approximately) 50,000. Assuming that the proportion of aspirin takers in this population was the same as for the gastric ulcer patients in your sample (57 out of 71), the number of aspirin takers supplied would have been approximately 40,000, and the annual consumption per head would have been 320.

It would appear that the average consumption of aspirin by the gastric ulcer patients before treatment can be considered as having been established as higher than that of the general population. The degree of excess cannot be precisely measured by the data available, but may well be much lower than that computed by you. Instead of being seven times as high, it could, on my figures, be as low as three times as high, i.e., $(1,170 \pm 146) \div 320$.

Hence, it seems that in this group of gastric ulcer patients the consumption of aspirin is somewhere between three and seven times the aspirin consumption of the general population of the area.

Anatomical Distribution of the Gastric Ulcers.

Table II gives some idea of the distribution of the ulcer craters found on barium-meal X-ray examination, from the point of view of site and also according to age and sex. Females outnumbered males only in the group under 40 years of age.

The distribution into upper, middle and lower thirds of the stomach is rather arbitrary. The distal third

includes pyloric, juxtapyloric and antral ulcers up to the pars angularis. The middle third covers that portion of the stomach which is normally vertical when the patient is erect. The upper third covers the fundus.

The adjacent area at the junction with the pars media appears to be a common site for posterior-wall and lesser curve ulcers, often of some size, in males in the older age group. Ulcers in this area and also in the pars angularis tend to be included in the upper and distal thirds rather than in the middle third.

There does not appear to be any significant relationship between the ulcer site and aspirin intake. Of the ulcers among the non-aspirin takers five were in the distal third, two in the middle third and six in the upper third.

Discussion.

There is little doubt that aspirin can produce acute erosive lesions of the stomach, or in other words, acute gastric ulcers. However, in an extensive search of the literature we have been unable to find any reference definitely relating the presence of chronic gastric ulcer to the ingestion of aspirin as a causal factor in any large series of cases. However, Levrat *et alii* (1953), in a paper discussing the subject of gastric hæmorrhage or the exacerbation of peptic ulcer after aspirin, do mention two cases of ulcer complicated by hæmorrhage in patients who regularly consumed large quantities of aspirin. Because of the regularity with which the drug was taken, it was difficult to establish the exact chronology between the taking of the aspirin, the appearance of the ulcer, and the hæmorrhage. Viar Bayo (1956) describes five cases in which the appearance of gastric pain and hæmorrhage, or the reappearance of gastric attacks, has coincided with the taking of aspirin. He concluded that aspirin is capable of aggravating and causing an old ulcer to exacerbate and also of producing acute hæmorrhagic gastritis. He states that today most pathologists and clinicians would deny that acute gastritis might so develop as to produce a chronic peptic ulcer. The main interest in Viar Bayo's paper lies in that he quotes a discussion on the subject of whether acute erosive gastritis could be the cause of a chronic gastric ulcer, held at the first International Congress of Gastro-Enterology in Brussels in 1935. The proceedings of this congress are not available to us, but, according to Viar Bayo, the possibility that acute erosive gastritis could be the cause of a chronic peptic ulcer, as Aschoff and Konjetzny suggested, was denied by the majority of those reporting at the Congress of Brussels—in particular, Moutier and Leotta. In effect, the findings of pathologists show that the gastric mucosa in normal secretory and nutritional conditions has a great capacity for regeneration when damaged by physical and chemical agents. Bockus believed that chronic peptic ulcer could appear as a result of primary gastritis only if this were so extensive as seriously to compromise the blood supply of a localized zone of the gastric wall.

Could it be that the view of the majority at this congress has bedevilled thinking ever since on the possibility of external irritants being an important cause of chronic gastric ulcer? Such would indeed seem to be the case,

and the recent studies of Billington (1960) on the rising incidence of gastric ulcer in Australian women are of interest. He states that this rise in incidence in women commenced in 1943, and he predicts that by 1965 the male to female ratio of 2:1, which existed prior to 1943, will be changed to 1:2, largely by an increase in gastric ulcer incidence in women under the age of 40 years. He postulates from mathematical analysis that there must be some environmental change responsible for this, and it is of interest that in our series of patients the over-all male to female ratio is 1:1, but is 1:1.5 in the aspirin takers and 6:1 in the non-aspirin takers. Could it be that the environmental factor postulated by Billington is aspirin? It is common observation that this drug is taken by women more often than by men and the over-all consumption of aspirin drugs is steadily rising.

After all, aspirin is a known gastric irritant and preparations of the drug do slowly disintegrate on storage, particularly in a warm, moist climate, into acetic acid and salicylic acid, both of which substances are certainly capable of producing acute mucosal ulcerations. Of course, because of the six months' warm, moist summer in North Queensland, it is possible that hydrolysis of aspirin may proceed here at a faster rate than elsewhere and may account partly for our findings. However, one suspects that if similar studies were carried out in other climates, probably little difference would be found because of the known irritating properties of aspirin itself.

It will be seen from our investigation that among the aspirin takers suffering from gastric ulcer 90% favoured proprietary compound aspirin, phenacetin and caffeine powders, but this was the case simply because this type of preparation is the most popular among all aspirin users in the area. This group of compound aspirin powders represents about 90% of the sales of aspirin in the area. Probably the type of aspirin preparation is of little consequence and will vary according to custom and advertisement in different localities.

Conclusion.

It is our belief that aspirin plays a causal role in the initiation and perpetuation of chronic gastric ulcer in a large number of patients suffering from this disorder in this particular area. It is impossible to be sure of the actual percentage in which aspirin is the causal factor, as certainly among the 57 aspirin takers there would be some patients in whom aspirin was not of causal importance and in whom the factors, whatever they are, causing gastric ulcer in the non-aspirin takers are operative. It is a clinical impression, though not fortified by any statistical survey, that alcoholism plays some part among the non-aspirin takers, and this view is confirmed somewhat by the male-female ratio of 6:1 in the non-aspirin takers, alcoholism being much more common among men than among women. As 74% of our patients were aspirin takers, possibly it could be concluded that aspirin is a causal factor in the production of somewhat more than 50% of cases of chronic gastric ulcer in this region. The frequency of the triad chronic headache, aspirin ingestion and chronic gastric ulcer is such that on clinical grounds, even without any statistical support, such a triad cannot be ignored as constituting an important clinical syndrome.

It may be asked why, with such vast consumption of aspirin drugs, are not the irritating effects of these drugs seen more frequently. In truth, the clinical syndromes of gastric bleeding and irritation from aspirin are common enough, but the majority of people must be able to take these drugs with impunity. The general principle of the soil and the seed must apply; there must be all degrees of susceptibility to aspirin in different stomachs. Also the laws of chance must apply—the more frequent the repetition of dose, the greater the chance of injury. Once injury has occurred, then whether there is a process of healing or whether chronic ulceration supervenes will depend upon individual factors relating to the reparative powers of the particular gastric mucosa,

the concentration of acid and pepsin, and the effect of further aspirin dosage.

This concept of aspirin as being the probable cause of chronic gastric ulceration in a large proportion of aspirin takers suffering from chronic gastric ulcers is of great help in both diagnosis and management. Not infrequently the ulcer pain may be felt in the back only, or in other areas of the abdomen often far removed from the epigastrium, or even in the lower part of the chest. In these circumstances a history of some painful condition, such as headache, necessitating the taking of large quantities of aspirin may lead the clinician to suspect chronic gastric ulcer with unusual pain referral, and may lead him to make the necessary investigations to demonstrate gastric ulcer. A history of aspirin ingestion may weigh a diagnosis in favour of simple ulcer rather than carcinomatous ulcer.

If the patient is an aspirin taker it may be expected that the cessation of the drug will have a favourable influence on the healing of the ulcer. The medical management of chronic gastric ulcer in contrast to chronic duodenal ulcer seldom presents much difficulty unless the patient presents with erosion of large arteries in the vicinity of the ulcer. Healing has occurred in all our cases of chronic gastric ulcer in which a trial of medical treatment has been given. This treatment has followed the usual lines of bed rest, an intragastric milk drip, antacids, belladonna or its equivalent and phenobarbital. Up to the present time we have not seen any ulcer recurrence, but this will have to be the subject of a further study, as insufficient time has elapsed to determine whether or not healing will be permanent.

The good results of medical treatment of chronic gastric ulcer, and the possibility in the aspirin takers that abstinence from aspirin will remove the irritating factor responsible for the ulcer, lead us to the belief that surgical treatment is rarely necessary unless erosion of major arteries has occurred. This is particularly important in women, in whom the results of partial gastrectomy are not good; it is also important in the case of high gastric ulcers, where gastrectomy is impossible, or if possible leaves such a small gastric remnant that the patient is left with quite severe post-operative disability.

Summary.

During a two-and-a-half-year period 78 patients with chronic gastric ulcer were admitted to the Townsville General Hospital. Fifty-seven of these patients admitted to taking aspirin drugs. The male to female ratio in the non-aspirin takers was 6:1 and 1:1.5 in the aspirin takers.

These gastric ulcer patients (including the non-aspirin takers for statistical purposes) took at least three times as much aspirin per head as the general population, and the aspirin takers alone may have taken up to seven times as much aspirin per head as the general population.

It is concluded that aspirin bears a causal relationship to perhaps more than 50% of the cases of chronic gastric ulcer in this region. We can find no reference to such a view having been propounded previously. The recognition of the sequential clinical triad of chronic headache, aspirin taking and chronic gastric ulcer is important from the points of view of both diagnosis and of management.

There does not appear to be any significant correlation between the ulcer site and aspirin intake.

Acknowledgement.

We are indebted to our fellow practitioners who so kindly allowed us to interview their patients, and to Dr. N. R. Scott-Young, Medical Superintendent of the Townsville General Hospital, for allowing us to include the records of patients who were not under our immediate care. Mrs. J. Curtin kindly helped with the collection of data. Mr. S. E. Solomon, Deputy Commonwealth Statistician and Government Statistician in the State of

Queensland, was kind enough to comment on the statistical significance of our investigation. The wholesale merchants of Townsville are to be congratulated on supplying data which otherwise would have been impossible to obtain.

Bibliography.

- ALVAREZ, A. S., and SUMMERSKILL, W. H. J. (1958), "Gastro-intestinal Hemorrhage and Salicylates", *Lancet*, 2: 920.
- BILLINGTON, B. P. (1960), "The Australian Gastric Ulcer Change: Further Observations", *Med. J. Aust.*, 2: 19.
- DOUTHWAITE, A. H., and LINTOTT, G. A. M. (1938), "Gastroscopic Observation of the Effect of Aspirin and Certain Other Substances on the Stomach", *Lancet*, 2: 1222.
- LEVYAT, M., LAMBERT, R., and REBOULLIAT, MME. (1958), "Ulcères gastro-duodénaux et hémorragies digestives déclenchées par l'aspirine", *Arch. Mal. Appar. dig.*, 47: 582.
- MUIR, A., and COSSAR, I. A. (1959), "Aspirin and Gastric Hemorrhage", *Lancet*, 1: 539.
- PAUL, W. D. (1943), "Effects of Acetylsalicylic Acid (Aspirin) on Gastric Mucosa; Gastroscopic Study", *J. Iowa St. med. Soc.*, 33: 155.
- SOLOMON, S. E. (1960), personal communication.
- SUMMERSKILL, W. H. J., and ALVAREZ, A. S. (1958), "Salicylate Anemia", *Lancet*, 2: 925.
- VIAR BAYO, J. (1956), "Aspirina y úlceras pépticas", *Rev. esp. Enferm. Apar. dig.*, 15: 607.

SOME RANDOM REFLECTIONS ON PREVENTIVE MEDICINE.

By D. A. DOWLING, M.B., B.S., D.P.H.

President of the Queensland Branch of the British Medical Association, Brisbane.

It is with a deep sense of responsibility that I assume tonight this high office of President of the Queensland Branch of the British Medical Association, and I find difficulty in expressing adequately my appreciation of the great honour which my fellow members have conferred on me—no honour surpasses that accorded by one's fellow practitioners. Tonight marks the completion of the sixty-seventh year of activity of the Queensland Branch of the British Medical Association. That bald statement is more significant than it seems at first sight, because this will be also the last meeting of this branch under that banner, which it has been so proud to bear. It is with very mixed feelings that, on January 1, 1962, we will change our title to the Australian Medical Association. The change is inevitable, but it will loosen ties which we have cherished since the branch was established in 1894. We will always retain sentiments of affection and gratitude towards our mother association, under whose protection and with whose help we have passed through our childhood and adolescence. It is felt that now we have reached adulthood, and face our own native problems—so different from those in the mother country—our association should be a national one. This idea has been stimulated and encouraged by the British Medical Association in the United Kingdom, and the separation, true to the British tradition, is being achieved with the utmost goodwill and mutual affection.

Bearing in mind that my working life has been spent in the field of public health, I propose tonight to speak on the subject of preventive medicine, and to offer you some rather random reflections mainly concerning the influence it has had on the lives of all of us. In every field of human endeavour the epochal discovery of yesterday is the commonplace of tomorrow. No doubt by the end of this century journeys such as those recently undertaken by Gagarin and Titov will be everyday affairs. Quickly we take for granted a discovery protecting us from some previously uncontrollable disease—the result

of the devoted work of some scientist or the careful and acute observation of some practitioner, or maybe the deductions of a medical statistician or an epidemiologist. There would be comparatively few today who would even remember the name of Jenner. Yet his work probably played a greater part in the relief of human suffering than that of any other human, and it was responsible for preventing, or at least postponing, the deaths of millions of people. One hundred and sixty odd years ago he was acclaimed and revered by the civilized world, and had honours and rewards heaped on him by governments and learned societies.

Even in our own lives it is difficult to recall the anxiety we experienced that the lives or the health of our children would be endangered by some disease which is now a bad and somewhat dim memory. It is a good thing to glance back occasionally at conditions of the past, and to count our blessings; we are spared so much suffering that was previously commonplace.

Records show that, even in very ancient times, man was aware that certain diseases were acquired from his environment—from other humans or from some unidentified factor in his surroundings. Originally and for many years explanations of the cause of disease were based on superstitions such as the wrath of the gods, visitations of evil spirits and so on. Quite early in history there was some recognition of the communicable nature of certain diseases, and even of the fact that some of them apparently spread from person to person. Although they had not the vaguest conception of its cause or its method of spread, the Chinese and the Indians in quite ancient times recognized the communicability of smallpox, and they also knew that one attack of the disease usually left an individual free of further attacks. Recognition that an attack of smallpox gave some protection against further attacks led to the practice of "engrafting" or "inoculation"—that is, of introducing the disease artificially into a healthy subject, in the hope of producing a mild attack, and thus preventing a severe one. This precursor of modern vaccination began in China and India in very early times, persisting and being widely practised until the early 1800's, despite the facts that hopes of a mild attack were not always realized, and that epidemics were known to have originated from the practice.

In 1955 Sir Lionel Whitby, a very eminent Englishman, delivered in Melbourne the annual oration commemorating the late Sir Richard Stawell. On that occasion Sir Lionel asserted:

Leviticus and Deuteronomy can be regarded as the first text-book of hygiene, and Moses was, undoubtedly, the first medical officer of health.

Chapters XIII and XIV of Leviticus give precise instructions for dealing with leprosy—isolation, disinfection, inspection and so on—as well as measures for other communicable diseases. In the sixth century Hippocrates, the father of medicine, propounded the following dictum:

Epidemic disease is often promoted by a specific, unknown, and extraordinary condition of the air due to the presence of the Divine Wrath (quid divinum), which may also exist in miasmas and certain other impure things.

Until Jenner's time progress was painfully slow and the theories (and the health measures based on the theories) were always imprecise and most often quite false. Nevertheless, despite the theories of evil spirits and the wrath of the gods, it was observed that some diseases appeared to spread from person to person, and gradually the idea of contagiousness became established. In 1554 Fracastorius proposed that diseases should be classified as either contagious or non-contagious.

For the three following centuries the medical and health world was divided into two camps. The non-contagionists, who were considerably in the majority, held that epidemic diseases were caused by some inanimate matter or gas associated with miasmas or effluvia generated by decomposing organic matter. The smaller group held that contagiousness was associated with some

¹Delivered at the annual meeting of the Queensland Branch of The British Medical Association on September 2, 1961.

form of living matter and propounded a "germ theory". The miasma theory persisted into modern times, even after germ causation had been proved. In 1879 Professor Bailey of Louisville, United States of America, spoke on the transmission of a section of the climate of a yellow fever district, and asserted that ships brought something from the climate and not from the sick. Even today, it is not uncommon to find people frightened that blocked and smelly drains are unhealthy and a cause of disease.

In the search for means to combat communicable disease, many measures were adopted which, in the light of modern knowledge, seem quite fantastic. The earliest quarantine measures, imposed in Venice in the fourteenth century, required all shipping to lie at anchor for 40 days before having any communication with the shore. The word "quarantine" derives from the Italian or Latin word for 40, but there is no clear explanation why the period was 40 days. Its derivation possibly has some association with the period of Jewish ceremonial.

It was not until 1796 that some real light appeared on this confused scene. It was then that Edward Jenner, an obscure practitioner at Berkeley, in the vale of Gloucester, a dairy district, published an account of his investigation of a local legend. At that time smallpox was ravaging England, as well as the rest of the settled world. It was one of the most fatal, and undoubtedly the foulest and most loathsome of all diseases. It was as common as measles but infinitely more deadly. It depopulated cities, exterminated tribes and, in Europe alone, killed hundreds of thousands yearly. That it was the most feared of all diseases is shown by Ben Johnson's anguished outcry:

Envious and foul disease, could there not be one beauty in an age and free from thee.

Macaulay described it as "the most terrible of all the Ministers of Death", and as "turning the babe into a changeling at which the mother shuddered, making the eyes and cheeks of the betrothed maiden objects of horror to the lover".

Jenner had been impressed with a local belief that those who had had cowpox, a mild disease, could not contract smallpox. Using scientific methods of investigation, learned from the great John Hunter, he tested and proved the truth of this legend. His findings spread like wildfire throughout the civilized world and brought the first real relief from the onslaughts of any epidemic disease. Jenner's vaccination is applied today, nearly 200 years later, as he used it, except for very minor changes in techniques, and has relieved most but not all countries of the dire scourge of smallpox. The wonder is that, with this sure means at our disposal, this disease has not yet been eliminated.

In 1854 sporadic cases of cholera were occurring in London, but in one circumscribed area it reached epidemic proportions. It was shown later that this epidemic arose from one infected well in Broad Street. An estimate based on sound evidence makes this single well responsible for 700 deaths. The startling fact is that, just a little more than 100 years ago—in the lifetime of the parents of some of us—the citizens of one of the largest and oldest cities in the world were dependent for water on very antiquated wells which were readily accessible to sewage contamination. This appalling disaster occurred at a time when the scientific world was, at last, beginning to establish the real cause of communicable disease. During the middle and latter part of the 1800's, Pasteur and Koch and their followers established the causative relationship between microorganisms and communicable disease. One after another, over the past 100 years, the specific organisms responsible for nearly all of these diseases have been isolated and cultivated. This was the most important development in relation to preventive medicine in all recorded history. For the first time preventive measures could be based on the scientific facts which had been unfolding over this period.

Here it may be appropriate to mention some of the more spectacular achievements of preventive medicine in

more recent times. The engineer de Lesseps, having completed successfully the building of the Suez Canal, undertook with confidence a similar task on the Isthmus of Panama. Apparently he had not taken into account that this tropical area was an endemic focus of yellow fever, and his construction attempts were defeated by the *Aedes* mosquito and had to be abandoned. Subsequently the United States of America undertook the task, and the first move was to send in public health experts under Gorgas. At that time there were many gaps in our knowledge of yellow fever, but it was known that the *Aedes* mosquito was the vector which carried it from human to human. The first effort was directed towards the elimination, or at least the suppression of the mosquitoes and then to the protection of the work force from mosquitoes by means of suitable clothing, housing and so on. These measures kept the workers free from infection, and they were able to complete the canal.

During the South African War of 1899-1902 the British Army lost far more men from typhoid fever than from battle casualties. At that time our knowledge of the epidemiology of this disease had many gaps. Soon afterwards specific prophylactic vaccination against typhoid was developed. It was first used by the Japanese in the Russo-Japanese war, and gave their army practically complete protection. This experience was repeated in all armies in the 1914-1918 War.

Typhus fever, throughout history, has been associated with famine, disaster and war, mainly because of the difficulty of maintaining personal cleanliness when these circumstances prevailed. Even in World War II there were tragic epidemics in Europe, especially in Germany, and in Japan and Korea. This is easily understandable when we remember that the body louse is the vector responsible for the transmission of typhus from person to person. No doubt more than one person in this room tonight could give a vivid account of personal experiences with these very irritating little creatures—only during wartime, of course. When the allied armies captured Naples in 1943 they were faced with quite a serious epidemic of this disease in the civilian population. Using authoritarian methods, available only to armies and other dictators, the United States Army imposed compulsory dusting of all civilians with D.D.T. and halted the epidemic, literally in hours.

Australia paid scant heed to the dangers of malaria in New Guinea until the campaign was well under way, and paid the inevitable penalty. Only when the casualties from this disease were endangering the whole campaign did the army give the hygienists a free hand. The story of the measures which were so strictly applied and of the prompt results provides one of the most dramatic stories of the war.

Not very long ago a United States authority stated that "if the knowledge now existing among well informed men in the medical profession were actually applied in a reasonable way and to a reasonable extent, 42 per cent. of the deaths in the United States could be prevented or postponed". I think the force of this statement is well illustrated by the Australian Anti-Tuberculosis Campaign. In 1947, after a detailed survey of the problem in Australia, this campaign was planned and authorized. Until that time little had been done in this country to combat tuberculosis. "Rest, good food, fresh air and sunshine" was almost all that was offered to its victims. Australia provided all of these in abundance; and we deluded ourselves as to the seriousness of the problem. In 1947 the death rate in Australia from this disease was 29.6 per 100,000 head of population. In 1959, 12 years after the initiation of the campaign, the death rate was 5.48 per 100,000 head—less than one-fifth of the earlier figure. This result was achieved by the provision of special hospitals (seven in Queensland), clinics, mobile X-ray units, trained personnel and liberal allowances for sufferers, and by the personal enthusiasm and drive of a devoted physician, Dr. (now Sir) Harry Wunderly. At our present population, these figures represent a saving of approximately 2400 lives a year. This result is surely good value

for the £65,906,980 which has been spent on the campaign by the Commonwealth, especially as it is mainly young lives which have been involved.

Only during the past 50 or 60 years have effective measures been taken to halt the appalling waste of infant life in the community. In 1903, of every thousand Australian babies born, 111 died in the first year of life. By 1960 this infant mortality rate has been reduced progressively to 20 per thousand. Had it continued at the 1903 rate, infant deaths in 1956 would have amounted to nearly 20,000 more, or approximately five times the number that actually did occur. Such a mortality rate would have cost Australia far more lives over the years than she lost in all the wars.

One of the more spectacular achievements has been the virtual suppression, over the past few years, of poliomyelitis. Already memories are fading about the anxieties experienced every "polio season" before the introduction of Salk vaccine. Less than 20 years ago we were ignorant of the precise epidemiology of this disease, which presented so many baffling features; now we have good reason to anticipate that the present generation of children will be spared this heart-rending, crippling disease.

The last hundred years, and especially the last 25 years, have witnessed the most remarkable developments in medicine. Primarily these have resulted from the work of the pioneer bacteriologists, who gave us the first real scientific basis on which to build and the means of planning factually based preventive measures. Then came the sulpha drugs, originally developed, strangely enough, by research chemists in the German dye industry. These were soon surpassed by Fleming's chance discovery of penicillin, which, after 10 or so years as a laboratory phenomenon, was developed by Florey and Chain as the first of the antibiotics—those remarkable therapeutic agents which really do merit the title, debased by journalists, of "miracle drugs".

What does the future hold? The solution of many of our present problems would seem to lie in the field of biochemistry—a subject which was commencing to be taught to medical students only 40 years ago. Predictions are dangerous—but surely, at the turn of this century, the answers to the big problems of cancer, heart diseases, arthritic diseases and so on will be available. One envies those entering on a medical career now for the exciting prospect before them. They begin where we leave off; but in handing on the banner, I think our generation can claim, quite justifiably, that it has been responsible for the greatest advances in the healing art which have ever been achieved.

At this stage of history it is satisfying to look back on nearly 40 years which have seen medicine emerging from the dark ages, at the beginning of which, comparatively, so little was known, and the means of combating disease were so meagre, and to watch it developing into the vigorously growing science that it is today. One regrets that one will not be able to see and share in the inevitable developments which will occur before this twentieth century ends. The bacteriologists, the haematologists, the virologists and the chemists have made enormous contributions to the sum of human knowledge for the sake of human welfare. Now we expect the biochemists to make the major contributions in new developments. However, it will still be, as ever, the general practitioner who applies in the main whatever remedies the future produces, and we are confident that his guiding motive will continue to be the welfare of his patient.

This attitude was well expressed by Sir Thomas Browne, seventeenth century physician, who wrote in his medieval English:

I feel not in me those sordid and unchristian desires of my profession; I do not secretly implore and wish for Plagues, joyce at Famines, revolve Ephemerides and Almanacks in expectation of malignant Aspects, fatal Conjunctions and Eclipses. I rejoyce not at unwholesome Springs, nor unseasonable Winters . . . I desire rather to cure his infirmities than my own

necessities . . . I am not only ashamed, but heartily sorry, that, besides death, there are diseases incurable, yes not for my own sake, or that they be beyond my Art, but for the general cause and sake of humanity, whose common cause I apprehend as my own.

ACUTE PANCREATITIS AND HISTAMINE.¹

By E. R. TRETHEWIE, M.D., D.Sc., M.R.A.C.P.,

Department of Physiology, University of Melbourne.

ACUTE PANCREATITIS, a condition which varies considerably in severity, may be associated with much nausea and vomiting, and sometimes a severe state of shock is produced.

Rocha e Silva (1940) showed that histamine is released from tissues by trypsin, and Trethewie (1942) showed that histamine, adenosine, a substance producing cardiac depression, adenosine inactivating enzyme and a muscle stimulant substance other than histamine (S.R.S.) were also released. It was suggested that the liberation of such substances locally, and occasionally peripherally (associated with fat necrosis), was a significant factor in producing the shock-like state in pancreatitis (Trethewie, 1942). It was also pointed out that the celiac sympathetic plexus lying so close anatomically to the damaged pancreas, with release of activated trypsin, might also add to the severity of the condition clinically.

It was therefore considered worthwhile to determine if antihistamines might be of value in the treatment of pancreatitis, especially with relation to the nausea and vomiting which might be due to histamine release.

Clinical Findings.

In six instances, patients in whom a diagnosis of acute pancreatitis was made were treated with antihistamine, given in one case orally and in five cases intravenously. In three instances dramatic relief was obtained. In the remaining three, no evident response was noted. In each of the latter three instances the final diagnosis was subsequently found not to be pancreatitis. In one, the pain was probably of bowel origin with a great deal of psychological overlay; here biopsy of the head and tail of the pancreas was found to be normal. In one, the pain was associated with a common bile duct repair and laparotomy showed the pancreas was normal macroscopically. In the third the final diagnosis was acute cholecystitis and the pancreas was normal at operation.

Of the three patients who received relief from antihistamine, in two the diagnosis was confirmed by operation and in the third the final diagnosis was recognized as pancreatitis with a positive biochemical finding.

CASE I.—The patient, a female, aged 42 years, was admitted to hospital on April 25, 1950, with a history of sudden abdominal pain, vomiting and shock. The blood pressure was 140/90 mm. of mercury and the pulse rate was 90 per minute, the pulse being of moderate volume. The serum amylase level was 1600 units and the urinary diastase level 250 units, and a diagnosis of acute pancreatitis was made. Operation confirmed the diagnosis. Nausea and vomiting persisted after the operation next day, and on the following day the pulse rate rose to 120 per minute. On April 28, 1950, 100 mg. of "Anthisan" were given orally. The nausea and vomiting, which had continued, subsided in half an hour and there was no more vomiting. The dose was repeated four-hourly and there was no subsequent retching. The nausea did not return.

CASE II.—The patient, a female, aged 38 years, was admitted to hospital on June 4, 1956. For three years she had complained of knife-like pain under the right costal margin. Twelve hours before admission there was a sudden onset of very severe pain commencing in the right paraumbilical region. This pain became worse, spreading all over the abdomen and into the middle of the back. Prior to her admission the patient had vomited six times. There was no history of flatulent dyspepsia, and the patient felt

¹Technical assistance for this work was aided by a grant from the Australian National Health and Medical Research Council.

perfectly well 13 hours before admission. There was no past history of jaundice. The patient was pale, lying still in bed; the blood pressure was 165/80 mm. of mercury and the pulse rate was 108 per minute, the pulse being weak. The abdomen was tender all over, but especially on the right side and at the right costal margin. At operation on the following day (June 5, 1956) a Kocher incision revealed purulent, blood-stained fluid in the peritoneum; the pancreas was enlarged and fat necrosis was evident. On June 8 the malaise and pain continued. Following the intravenous injection of 100 mg. of "Anthisan" there was immediate relief of pain and temporary relief of malaise. With recurrence of the pain some four hours later immediate relief was again obtained after two intravenous injections each of 100 mg. of "Anthisan".

CASE III.—The patient, a female, aged 30 years, was admitted to hospital on April 8, 1960, complaining of generalized abdominal pain going through to the back and under the shoulder blades. She had previously suffered two attacks of acute pancreatitis after an attack of mumps eight years before. The pain was now intermittent and mild, and was described as colicky. The patient was pale and appeared to be in some distress, and the blood pressure was 130/70 mm. of mercury, while the pulse rate was 136 per minute. The abdomen was generally tender. A provisional diagnosis of recurrent pancreatitis was made. After the injection of 100 mg. of "Anthisan" intravenously on two occasions on the day of admission, no relief of the pain was obtained. The urinary diastase level was 10 Wohlgemuth units on April 9 and 7 units on April 18. Laparotomy on April 28 revealed a pancreas that was macroscopically normal, and two biopsy specimens from the body and tail of the pancreas were also normal on microscopic examination. The final diagnosis was that the pain was probably of bowel origin, with much psychological overlay.

CASE IV.—The patient, a female, aged 65 years, was admitted to hospital on March 26, 1960, with a history of five days' burning, stabbing pain in the epigastrium. On the day prior to her admission to hospital the pain became much worse, and she had frequent episodes of vomiting. In addition the patient had complained of intermittent nausea and vomiting for several months. She had also been short of breath on exertion for some months, and for one month had complained of polyuria with nocturia. On examination acute tenderness was found in the epigastrium. There was no release tenderness and no rigidity. The blood pressure was 150/80 mm. of mercury and the pulse, which was of good volume, had a rate of 80 per minute; there was no distress. Slight pitting oedema of the ankles was noted and the urinary diastase level was 330 units. A diagnosis of acute pancreatitis was made. The nausea and vomiting continued; on April 4, 100 mg. of "Anthisan" was injected intravenously, bringing immediate relief. Upon recurrence of pain two hours later antihistamine was again given, also with dramatic relief. Thereafter the pain did not return in a severe form. The final diagnosis was acute pancreatitis.

CASE V.—The patient, a female, aged 71 years, experienced the sudden onset of severe pain in the epigastrium at 4.30 p.m. on March 29, 1960; the pain radiated through to the back. The patient had had a cholecystectomy six years previously and severe pain similar to that precipitating the present admission four and three and a half years previously. On the second occasion laparotomy had been performed. The blood pressure was 164/110 mm. of mercury and the pulse rate 64 per minute on admission. The urinary diastase level was 10 units. The injection of 100 mg. of "Anthisan" intravenously on two occasions had no effect on the pain. On April 4 intravenous cholecystography demonstrated a dilated common bile duct with a negative shadow presumably due to a calculus. The final diagnosis was "probable stone in the common bile duct".

CASE VI.—The patient, a female, aged 76 years, was admitted to hospital on April 4, 1960. She had complained of headache for 12 months, and three days previously had experienced the sudden onset of severe central abdominal pain, which persisted intermittently. She had been vomiting brown material. She had never had any indigestion or flatulent dyspepsia. On examination the patient appeared ill; she was pale and was vomiting, and had generalized abdominal tenderness maximal in the epigastrium. No mass was palpable. The blood pressure was 180/140 mm. of mercury, and the pulse rate was 88 per minute, the pulse being of poor volume. An intravenous injection of 100 mg. of "Anthisan" was given, with no relief of pain. On April 6 she had more severe pain, again without relief from an antihistamine injection. Cholecystography on April 21

demonstrated that the gall-bladder did not fill with dye. The urinary diastase level on April 4 was 66 units at the time of the severe pain. On August 7 cholecystectomy was performed and cholelithiasis was demonstrated. The pancreas was normal. The final diagnosis was acute cholecystitis and cholelithiasis.

Discussion.

Subsequent to the suggestion (Trethewie, 1942) that the symptoms in acute pancreatitis (acute pancreatic necrosis) may in part be due to release of H-substances which were shown to be released by trypsin, clinical factors affecting the release of histamine have been discovered (for example, Feldberg and Paton (1951) demonstrated the release of histamine from muscle and skin by morphine). It is generally recognized clinically that morphine may accentuate the symptoms in pancreatitis. Histamine has been shown to be released by the bowel in anaphylaxis (Kellaway and Trethewie, 1940), and the spasms of the bowel which occur in man following the administration of morphine with subsequent constipation are also probably due to histamine release, though this has not yet been demonstrated directly. Gershon and Shaw (1958) have shown that antihistamine relieves the vomiting which follows morphine injection, suggesting that histamine release is a significant factor in the production of symptoms by morphine.

Rosenthal (1950) has presented evidence indicating that histamine can produce cutaneous pain, and Armstrong *et alii* (1953) have investigated numerous chemical substances, including histamine, showing that these substances are excitants of cutaneous pain.

The release of histamine by trypsin (Rocha e Silva, 1940; Trethewie, 1942) suggests that this substance may be released into the peritoneal exudate in pancreatitis and this may, in addition to stimulating pain fibres or pain terminals where it is released, also affect the celiac sympathetic plexus and the bowel wall locally. This may play a part in the production of pain in pancreatitis.

In the present paper evidence has been collected showing that nausea and pain with the associated vomiting are relieved in acute pancreatitis by the administration of antihistamine, and this suggests that these symptoms in acute pancreatitis are histamine-mediated. However, that there are other factors also operative (for example, from release of adenosine, S.R.S. and probably other substances) is not to be denied.

Summary.

1. Oral and intravenous doses of antihistamine were given to six patients provisionally diagnosed as suffering from acute pancreatitis.
2. Relief of pain was noted in three instances; in these cases the diagnosis of acute pancreatitis was confirmed.
3. No relief of pain was noted in the remaining three subjects; in these cases the diagnosis of acute pancreatitis was not confirmed.

References.

- ARMSTRONG, D., DRY, R. M. L., KEELE, C. A., and MARKHAM, J. W. (1953), "Observations on Chemical Excitants of Cutaneous Pain in Man", *J. Physiol.*, 120: 326.
- FELDBERG, W., and PATON, W. D. M. (1951), "Release of Histamine from Skin and Muscle in the Cat by Opium Alkaloids and Other Histamine Liberators", *J. Physiol.*, 114: 490.
- GERSHON, S., and SHAW, F. H. (1958), "Morphine and Histamine Release", *J. Pharm. (Lond.)*, 10: 22.
- KELLAWAY, C. H., and TRETHEWIE, E. R. (1940), "The Liberation of a Slow-Releasing Smooth Muscle-Stimulating Substance in Anaphylaxis", *Quart. J. exp. Physiol.*, 30: 121.
- ROCHA E SILVA, M. (1940), "Beiträge zur Pharmakologie des Trypsins. I: Wirkung des Trypsins auf die glatten Muskeln des Dünndarms und die Gebärmutter von Säugetieren. Die Freisetzung von Histamin nach Durchströmung der Meerschweinchenlunge mit Trypsin", *Arch. exp. Path. Pharmacol.*, 194: 335.
- ROSENTHAL, S. R. (1950), "Histamine as Possible Chemical Mediation for Cutaneous Pain. Dual Pain Response to Histamine (17842)", *Proc. Soc. exp. Biol. (N.Y.)*, 74: 167.
- TRETHEWIE, E. R. (1942), "Tissue Injury by Trypsin", *Aust. J. exp. Biol. med. Sci.*, 20: 49.

Reports of Cases.

HÆMOGLOBIN H DISEASE IN A PAPUAN.

By B. P. RYAN, M.B., M.R.C.P. (Ed.), D.C.H., D.G.O.,
Specialist Paediatrician, Port Moresby,

A. L. CAMPBELL, B.Sc.,

AND

PETER BRAIN, M.D., B.Sc., M.C.P.A.,
*Red Cross Blood Transfusion Service, Western
Australia.*

Hæmoglobin H was first described by Rigas, Koler and Osgood (1955) in members of an American Chinese family suffering from a hypochromic microcytic anaemia refractory to treatment with iron. The blood films were indistinguishable from those seen in thalassaemia. On electrophoresis of the hæmoglobin a new component was found, moving towards the anode more rapidly than hæmoglobin A at pH 8.6, and making up about 35% of the total hæmoglobin. When the blood was incubated with brilliant cresyl blue, inclusion bodies were seen in the red cells.

The inheritance of hæmoglobin H is peculiar, since the simultaneous presence of a gene for thalassaemia (Motulsky, 1956) or perhaps for some abnormality of the hæmoglobin other than H (Vella, Wells, Ager and Lehmann, 1958) appears to be necessary if the gene for hæmoglobin H is to find expression. If this is so, then all cases of hæmoglobin H disease are in fact cases of thalassaemia-hæmoglobin H disease or some other such combination.

Hæmoglobin H has now been found in people of Mediterranean origin, and in the Middle and Far East in an Arab, Chinese, Indochinese, Thai, Filipinos and a Nepalese Gurkha (Brain and Vella, 1958). One of us (Ryan, 1961) has recently reported thalassaemia in a Papuan. In this paper we report the occurrence of hæmoglobin H disease, probably in combination with thalassaemia, in a Papuan woman.

Clinical Record.

The patient was a woman, aged about 30 years, who was born in Kerema and has worked for eight years as a housemaid in Port Moresby. Her parents are dead, but she has two brothers who are said to be healthy. Five years ago, after an uneventful pregnancy, she was delivered of a normal child.

She was first examined on October 20, 1960, being then about 26 weeks pregnant. She gave a history of increasing fatigue and difficulty in carrying out her duties. The relevant physical findings, apart from pregnancy, were pallor, an enlarged spleen extending to the umbilicus, and a liver palpable two fingers' breadth below the costal margin.

The blood had a hæmoglobin level of 8.3 grammes per 100 ml., a hæmatocrit value of 32% and a mean corpuscular hæmoglobin concentration of 26%; reticulocytes totalled 6.5% and the white cells 2800 per cubic millimetre, with 67% neutrophils, 23% lymphocytes, 4% monocytes and 6% eosinophils. The film showed much anisocytosis and poikilocytosis, with target cells and moderate hypochromia. Examination of the bone marrow showed hypercellular fragments and trails with marked erythroid hyperplasia. Erythropoiesis was predominantly normoblastic, but some megaloblastic erythropoiesis was also seen. There was much polychromasia of red cells in the marrow films, and hæmosiderin was observed in marrow fragments. When red cells were incubated with a solution of 1% brilliant cresyl blue in acid-citrate-dextrose solution, most of the cells showed the remarkable inclusion bodies shown in Figure I. The alkali denaturation test of Singer, Chernoff and Singer (1951) showed less than 2% of undenatured hæmoglobin.

Electrophoresis of the hæmoglobin was carried out in Perth. Oxid cellulose acetate strips, measuring 20 x 5 cm., were used between glass plates with barbitone (pH 8.6) and citrate (pH 6.6) buffers of 0.05 ionic strength. A potential of 550 volts was applied for 20 to 30 minutes. The method will be described in more detail elsewhere. Both at pH 8.6 and 6.6 a component with the mobility of hæmoglobin H was plainly visible. The A₂ component was reduced; this is clearly seen in Figure II, which shows the pattern at pH 8.6. This strip has been stained with bromphenol blue, and the A₂ component is so faint that it may be invisible in a half-tone reproduction. In a normal pattern the A₂ band has about the same density as the adjacent X component of Derrien, Laurent and Borgomano (1956), which is seen at the top of Figure I. (This X component is a colourless

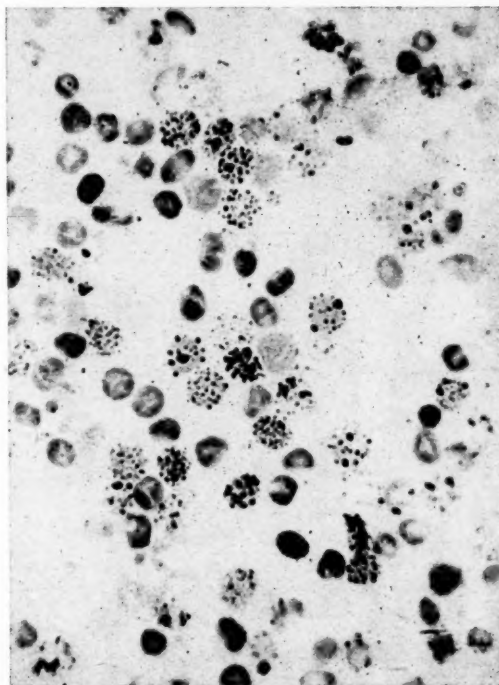


FIGURE I: Inclusion bodies seen in red cells after incubation for 30 minutes with brilliant cresyl blue.

protein substance, not a hæmoglobin fraction.) The solution of hæmoglobin prepared for electrophoresis showed the sludging which is characteristic of solutions containing hæmoglobin H.

The urine contained a few red cells and granular casts with 10 to 20 pus cells per high-power field. One or two hookworm ova per low-power field were seen in the stool. Liver biopsy showed much hæmosiderin. Nothing abnormal was found on radiological examination of the skeleton except for slight thickening of the skull.

The patient was transfused with one litre of blood, and treated with iron and folic acid tablets given orally. On November 2, 1960, she was delivered of a still-born premature baby. On December 20, 1960, seven weeks after delivery, her hæmoglobin value was 9.4 grammes per 100 ml. and the marrow showed normoblastic hyperplasia. She was again admitted to hospital on January 9, 1961, complaining of abdominal pain and vomiting. There were many pus cells in the urine and her hæmoglobin level had fallen to 6.4 grammes per 100 ml. She was transfused and treated for the urinary infection. Subsequently her hæmoglobin level has remained at about 10 grammes per 100 ml.

It was not possible to examine either of the patient's brothers. Her husband showed no clinical or hæmatological

abnormalities. Her son, aged 5 years, had a normal blood count and electrophoretic picture with a normal level of A_2 and no haemoglobin H. His red cells showed no inclusion bodies when treated with cresyl blue.

Discussion.

This patient shows haematological evidence of haemolytic anaemia with hypochromia of the red cells, a fast-moving haemoglobin component on electrophoresis, and red cell inclusion bodies. The haemosiderin in the bone marrow fragments and liver biopsy specimen shows that

Dittman, Haut, Wintrobe and Cartwright (1960), who have described this condition. Both these reports mention the interesting reduction of A_2 below normal levels.

Summary.

A case of haemoglobin H disease is described in a Papuan woman. This is probably in fact a case of thalassaemia-haemoglobin H disease, but family studies to confirm this could not be made. It was complicated by the association of megaloblastic anaemia during pregnancy. The patient's one surviving child is haematologically normal.

Acknowledgements.

We thank Dr. W. R. Pitney, haematologist, Royal Perth Hospital, Western Australia, who reported on the bone marrow films and carried out the cresyl blue incubation tests, Dr. D. H. Curnow, biochemist, Royal Perth Hospital, for the alkali denaturation results, and Professor R. ten Seldam, of the Department of Pathology, University of Western Australia, who reported on the liver biopsy specimen. This paper is published with the permission of Dr. R. F. R. Scragg, Director of Public Health, Territory of Papua and New Guinea.

References.

- BRAIN, M. C., and VELLA, F. (1958), "Haemoglobin H Trait in a Nepalese Gurkha Woman", *Lancet*, 1: 192.
- DAVIDSON, L. S. P. (1952), "Thirty Years' Experience of the Megaloblastic Anemias", *Edin. med. J.*, 59: 315.
- DERRIEN, Y., LAURENT, G., and BORGOMANO, M. (1956), "Sur une protéine accompagnant l'hémoglobine de l'homme adulte et sa concentration dans la fraction alcalino-résistante isolée de cette dernière", *C.R. Acad. Sci. (Paris)*, 242: 1538.
- DITTMAN, W. A., HAUT, A., WINTROBE, M. M., and CARTWRIGHT, G. E. (1960), "Haemoglobin H Associated with an Uncommon Variant of Thalassaemia Trait", *Blood*, 16: 975.
- DRURY, M. I., and GEOGHEGAN, F. (1957), "Congenital Haemolytic Anemia Complicated by Megaloblastic Anemia of Pregnancy", *Brit. med. J.*, 2: 393.
- GOLDBERG, M. A., and SCHWARTZ, S. O. (1954), "Mediterranean Anemia in a Negro Complicated by Pernicious Anemia of Pregnancy", *Blood*, 9: 648.
- MOTULSKY, A. G. (1956), "Genetic and Hematological Significance of Haemoglobin H", *Nature (Lond.)*, 178: 1055.
- RIGAS, D. A., KOLER, R. D., and OSGOOD, E. E. (1955), "A New Haemoglobin Possessing a Higher Electrophoretic Mobility than Normal Adult Haemoglobin", *Science*, 121: 372.
- RYAN, B. (1961), "Thalassaemia: Report of a Case in Papua", *Med. J. Aust.*, 1: 128.
- SINGER, K., CHERNOFF, A. I., and SINGER, L. (1951), "Studies on Abnormal Hemoglobins. I. Their Demonstration in Sickle-Cell Anemia and Other Hematological Disorders by Means of Alkali Denaturation", *Blood*, 6: 413.
- VELLA, F., WELLS, R. H. C., AGER, J. A. M., and LEHMANN, H. (1958), "A Haemoglobinopathy Involving Haemoglobin H and a New (Q) Haemoglobin", *Brit. med. J.*, 1: 752.
- WOLFF, J. A., MICHAELS, R. H., and VON HOFE, F. H. (1958), "Haemoglobin H-Thalassaemia Disease", *Blood*, 13: 492.

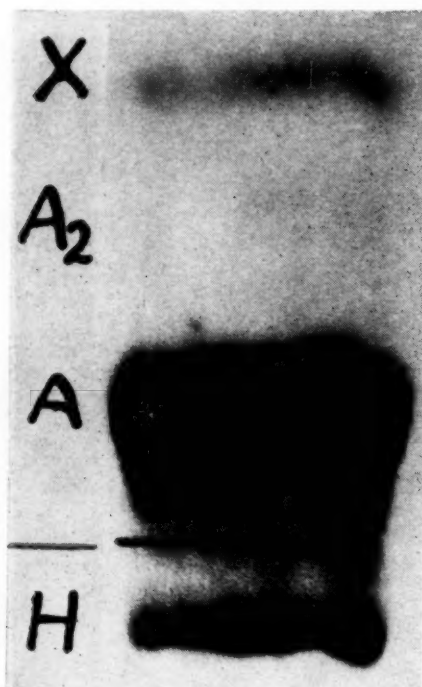


FIGURE II: Electrophoretic pattern of the haemoglobin at pH 8.6, stained with brom-phenol blue. The anode was at the lower end. The starting line can be seen between the A and H components. The apparent migration of A, A_2 and the X component towards the cathode is due to endosmosis, and makes for better resolution of small components.

iron deficiency is not the cause of the hypochromia. The associated megaloblastic erythropoiesis which was found during pregnancy has been described before in haemolytic anaemia (Davidson, 1952; Goldberg and Schwartz, 1954; Drury and Geoghegan, 1957). It probably arises from a combination of inadequate intake and excessive utilization of folic acid. In this patient it responded either to the folic acid therapy or to the termination of pregnancy, since megaloblastic erythropoiesis was no longer seen on examination of the marrow seven weeks after delivery. The anaemia recurred recently with an infection of the urinary tract. However, in the absence of complications this patient appears able to maintain an adequate haemoglobin level of about 10 grammes per 100 ml.

We describe this as a case of haemoglobin H disease, rather than thalassaemia-haemoglobin H disease, since the genetics of haemoglobin H is still somewhat obscure and since we have not been able to prove that the thalassaemia trait occurs in other members of the patient's family. However, it is in all probability a case of thalassaemia-haemoglobin H disease, and the findings agree well with those of Wolff, Michaels and von Hofe (1958) and of

SICKLE-CELL THALASSAEMIA DISEASE IN A FAMILY WITH INTERMARRIAGE OF SIBLINGS.

By O. E. BURTZ-OLSEN, M.D., K. BELL, B.V.Sc., B. I. HILLCOAT, M.B., B.S., and R. L. G. NEWCOMBE, M.B., B.S., *Mater Misericordiae Children's Hospital, Brisbane; Department of Physiology, University of Queensland; and Department of Pathology, Brisbane Hospital, Brisbane.*

WITH the influx of Mediterranean people into Australia the number of genes giving rise to abnormal haemoglobins must steadily increase and may soon present a minor public health problem. Reports of cases of these haemoglobinopathies should be published when they are detected, to enable the problem to be assessed. We describe here what is to our knowledge the first reported Australian case of sickle-cell thalassaemia disease (microdrepanocytic anaemia). Genetic interest is increased by

the fact that the family includes two brothers married to two sisters. The family originated from Sicily, and the relationship and hematological diagnosis of the different members available in Brisbane are shown in Figure I.

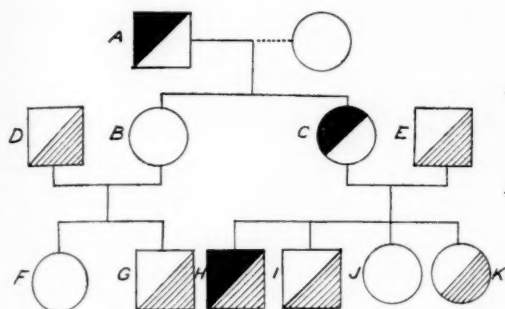


FIGURE I: The relationship and diagnosis of the members of the family. The males D and E are brothers. Black indicates that the individual possesses the gene for sickle-cell hemoglobin; hatching indicates the gene for thalassemia, and white indicates the possession of normal hemoglobin A.

The diagnosis in each case was established by starch-gel electrophoresis (Goldberg, 1958) to detect fetal and sickle-cell hemoglobins, and by paper electrophoresis (Goldberg, 1959) to demonstrate a qualitative increase in the concentration of A_2 hemoglobin. The presence of sickle-cell hemoglobin was confirmed, as the red cells of the three carriers (A, C and H) sickled when deprived of oxygen.

The findings by which the diagnosis was established in each member of the family are tabulated in Table I, and examples of the different abnormalities are illustrated in Figures II and III.

TABLE I.

The Types of Hemoglobin Found in the Family Members by Starch-gel and Paper Electrophoresis.

| Subject. | Type of Hemoglobin. | | | | Diagnosis. |
|----------|---------------------|-------------------|-------------------------------|---------------|----------------------------------|
| | Hemoglobin S. | Fetal Hemoglobin. | Increase in A_2 Hemoglobin. | Hemoglobin A. | |
| A | + | — | — | + | Sickle-cell trait. |
| B | — | — | — | + | Normal. |
| C | + | — | — | + | Sickle-cell trait. |
| D | — | — | + | + | Thalassemia minor. |
| E | — | — | + | + | Thalassemia minor. |
| F | — | — | — | + | Normal. |
| G | — | — | + | + | Thalassemia minor. |
| H | + | + | ? | — | Sickle-cell thalassemia disease. |
| I | — | — | + | + | Thalassemia minor. |
| J | — | — | — | + | Normal. |
| K | — | — | + | + | Thalassemia minor. |

The alkaline denaturation test (Singer *et alii*, 1951) indicated that the blood of the probitus (H) contained 24% fetal hemoglobin. Traces only were found in the blood of the other members of the family. Routine hematological investigations indicated that only the probitus was anemic. The findings in his case were as follows. The hemoglobin value was 9.4 grammes per 100 ml.; the erythrocytes numbered 3,900,000 per cubic millimetre and the packed-cell volume was 34%. Reticulocytes totalled 12%; there were 9800 leucocytes per cubic millimetre, of which neutrophils accounted for 50% and lymphocytes accounted for 50%. The blood smear revealed hypochromia, microcytosis, target cells and stippled cells, but no nucleated cells. The osmotic fragility was tested by Dacie's method and hemolysis began in 0.4% saline

solution and was incomplete in 0.1% saline solution. The erythrocyte sedimentation rate was 5 mm. in one hour, and a bone marrow smear showed normoblastic hyperplasia. An X-ray examination of the skull and bones revealed no definite abnormalities.



FIGURE II: This illustrates the clear distinction between the different hemoglobins after starch-gel electrophoresis. Note the complete absence of normal hemoglobin A in the blood of the probitus.

Target cells and hypochromic microcytes were present in the blood smears of D, E, G, I and K, confirming the diagnosis of thalassemia minor in these people.

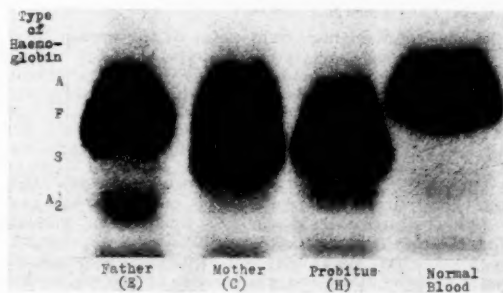


FIGURE III: Paper electrophoresis of the hemoglobins of probitus and his parents compared with the hemoglobin from a normal person. Note the definite increase in A_2 in the father, and the slighter increase in the probitus.

The clinical history of the probitus is not spectacular. He is now eight years of age and has been treated in hospital at intervals for the last four years. His first complaint was paronychia, which was followed by several mild respiratory infections. He has complained of pains over the sternum and was once admitted to the wards owing to an attack of epigastric pain which disappeared untreated. Lately he has felt vague pains in both legs, and he went through a short period of paresis of the lower limbs. On examination his stature is normal for his age; he is pale, and high malar bones give him a

definite mongoloid appearance. His spleen is palpable 5 cm. below the left costal margin and the edge of his liver is also palpable. Slight patchy discoloration is present over both tibiae. Examination of the other members of the family revealed no abnormalities.

Discussion.

Full descriptions of the genetical difficulties, the varying haemoglobin patterns and the different clinical manifestations of microdrepanocytic anaemia are given in the symposium on abnormal haemoglobins organized by the Council for International Organization of Medical Sciences (1959). The case described here shows the most common type of the disease. The anaemia is less than in either sickle-cell disease or thalassaemia major; the patient has only needed two blood transfusions during the four years he has been under observation. He has a large percentage of haemoglobin S with complete absence of normal haemoglobin A, and yet has comparatively few clinical symptoms and signs; of these few, vague bone pains and splenomegaly are outstanding. The disease is not as severe as either of the homozygous conditions of thalassaemia major or sickle-cell disease, in which the patients rarely reach adulthood and virtually never produce offspring. Microdrepanocytic anaemia may be difficult to differentiate from sickle-cell disease without supporting evidence from the examination of the family, but in our case the diagnosis was fairly certain from the features of thalassaemia in the blood smear.

The case illustrates well how two apparently normal, healthy parents may unexpectedly produce an incurably ill child. It would seem reasonable for people of Mediterranean stock to have their haemoglobin patterns established before marriage to avoid such tragedies.

An interesting question arises in this connexion. Would it be justifiable for the Australian Commonwealth to refuse entrance to migrants carrying these undesirable genes? Once the gene for an abnormal haemoglobin has been introduced into the country by a person likely to have children, the gene will persist for generations in his descendants. So far the only suggested desirable property of the abnormal haemoglobins is a possible protection against malaria, which has no application in Australia; otherwise they are more dangerous than, for instance, tuberculosis, which now excludes a migrant from the Commonwealth.

Perhaps the most important point of the present investigation is the comparative simplicity and fair accuracy with which the haemoglobinopathies can now be diagnosed by a few tests, which are well within the capacity of any reasonably equipped laboratory.

Summary.

A family in which two brothers with thalassaemia minor are married to two sisters, of whom one carries the sickle-cell trait, is described. One son of this sister suffers from the rare sickle-cell thalassaemia disease. A plea is made for the publication of all haemoglobinopathies encountered, to allow the assessment of the public health problem involved.

Acknowledgements.

This work on gene-markers is supported by a grant from the National Health and Medical Research Council, to whom we are most grateful.

The case records are published with the permission of Dr. Brian Purssey, Director of Medical Services, Mater Misericordiae Hospitals. The child is under the care of Dr. Clarke Ryan, pediatrician. The pathology staff of the hospital gave valuable time for the routine investigations. Dr. F. Facchini helped to gain the cooperation of members of the family.

References.

- COUNCIL FOR INTERNATIONAL ORGANIZATIONS OF MEDICAL SCIENCES (1959), Symposium on Abnormal Haemoglobins, Blackwell Scientific Publications, Oxford.

GOLDBERG, C. A. J. (1958), "A New Method for the Starch-Gel Electrophoresis of Human Haemoglobins, with Special Reference to the Determination of Hb A₂", *Clin. Chem.*, 4: 484.

GOLDBERG, C. A. J. (1959), "A Discontinuous Buffer System for Paper Electrophoresis of Human Haemoglobins", *Clin. Chem.*, 5: 446.

SINGER, K., CHERNOFF, A. I., and SINGER, L. (1951), "Studies on Abnormal Haemoglobins. I. Their Demonstration in Sickle-Cell Anaemia and Other Hematologic Disorders by Means of Alkali Denaturation", *Blood*, 6: 413.

SOME ASPECTS OF THE BLIND-LOOP SYNDROME.¹

By IAN G. LYALL, M.R.A.C.P.,

Medical Registrar,

AND

PETER J. PARSONS, M.D., M.R.C.P., F.R.A.C.P.,

Honorary Physician to Out-Patients,
The Alfred Hospital, Melbourne.

THE BLIND-LOOP SYNDROME is characterized by weight loss, diarrhoea and multiple vitamin deficiencies, resulting from lesions in the small intestine causing stasis. These lesions may be divided into three groups: stricture (usually resulting from tuberculosis or regional ileitis), jejunal diverticula and anastomotic operations.

The purpose of this paper is to draw attention to the third group by the presentation of three cases in which a blind-loop syndrome followed enteroanastomosis for the relief of intestinal obstruction.

Case I.

The patient was a female, aged 45 years, who presented in May, 1955, with a six months' history of ankle oedema. For the same period she had noted fatigue, anorexia, recurrent abdominal pain and diarrhoea, with the passage of three pale, frothy stools per day. Her diet was inadequate in protein. She had a past history of six abdominal operations, the last three being for small-bowel obstruction from bands. At the final operation 12 months previously, a short-circuit operation had been performed.

Examination of the patient revealed wasting, a scarred abdomen and pitting oedema to the knees. A number of investigations were performed. The haemoglobin value was 11.8 grammes per 100 ml. A blood film showed mild hypochromic microcytic anaemia. The total serum protein content was 3.5 grammes per 100 ml. (albumin 1.4, globulin 2.1 grammes per 100 ml.). The serum calcium content was 3.6 mEq/l. The result of a glucose tolerance test was normal. A five-day fat balance study gave the following results: intake 132 grammes, excretion 85 grammes, absorption 36%. A barium-meal and follow-through X-ray examination displayed a rapid passage of barium from stomach to caecum with minimal clumping.

Surgery was recommended to relieve the blind loop, but consent was not given. On a diet of high protein and high vitamin content the patient's oedema disappeared, and her general health improved. However, four months later she had a recurrence of the oedema and an exacerbation of the diarrhoea. She consented to operation. In October, 1955, the late Mr. Robert Officer freed all her intestinal adhesions, undid an enteroanastomosis between the upper part of the jejunum and the distal part of the ileum (Figure 1) and restored normal continuity of the bowel.

Her convalescence was uneventful. Within a month, normality of bowel function and of serum protein level was restored. When she was reviewed five years later, she was in good health, although subject to occasional attacks of abdominal colic at approximately three-monthly intervals. The results of blood examination, the serum

¹Read at a meeting of the Gastro-Enterological Society of Australia, May, 1960.

protein content and the serum calcium content were normal. The faecal fat excretion on a normal diet was 7.7 grammes in 24 hours.

Case II.

A female patient, aged 60 years, presented herself in October, 1958, complaining of recurrent diarrhoea of 16 years' duration following an abdominal operation. She had a past history of appendicectomy in 1936, of laparotomy for intestinal obstruction in 1939, and of ileo-caecal anastomosis for intestinal obstruction in 1942. Diarrhoea subsequent to this procedure consisted of the passage of

was undone, and the normal anatomy was restored. Her post-operative course was uneventful. Four months later she had gained 14 lb. in weight and had one normal bowel motion per day. When she was reviewed two years later her nutrition was excellent, and general examination gave normal results. Her weight gain had been maintained. The blood findings, the result of the Schilling test, the serum protein content and the serum calcium and phosphorus contents were normal. The fat excretion in a 24-hour specimen of faeces was 2.7 grammes.

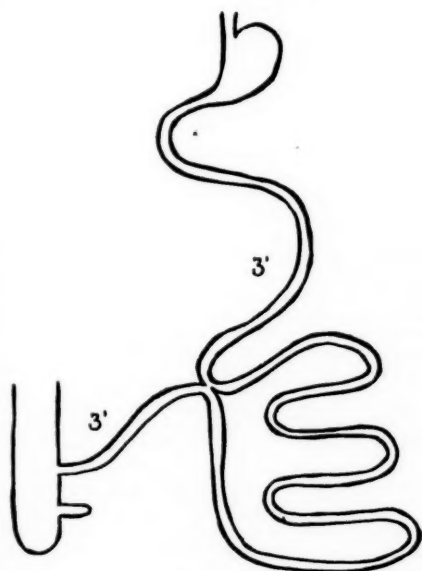


FIGURE I.

three loose, greasy, bulky, yellow stools per day. Over the two years prior to her admission to hospital it had become worse, and was associated with intermittent epigastric pain and loss of 28 lb. in weight.

Examination of the patient revealed generalized wasting, glossitis and lower abdominal scars. Investigations gave the following results. The haemoglobin value was 13.8 grammes per 100 ml. The mean corpuscular volume was 44%. A blood film showed occasional macrocytes. A Schilling test of the faeces showed that 47% of ^{57}Co -labelled vitamin B_{12} was excreted in 24 hours. In the urine, 3.9% of ^{57}Co -labelled vitamin B_{12} was excreted in 24 hours. The serum calcium content was 5.0 mEq/l., and the serum phosphorus content was 2.8 mEq/l. The fasting blood sugar level was 65 mg. per 100 ml. The result of a xylose tolerance test was normal. A 72-hour faecal fat estimation gave the following figures: 6.2 grammes in 24 hours, 41.0 grammes in 24 hours, and 21.5 grammes in 24 hours. A barium-meal and follow-through X-ray examination and a barium-enema X-ray examination gave no evidence of a blind loop.

She was treated conservatively with folic acid, cyanocobalamin, and B group vitamins, and improved on this régime. However, three months later, in view of an exacerbation of her diarrhoea to 15 motions per day, she was reinvestigated. Pronounced steatorrhoea was present; 41 grammes of fat were excreted in the first 24-hour specimen of faeces, and 21.5 grammes in the second 24 hours. A week's course of tetracycline did not alleviate the diarrhoea, but produced oral moniliasis.

A laparotomy was performed by Mr. James Guest in July, 1959. The ileo-caecal anastomosis (Figure II)

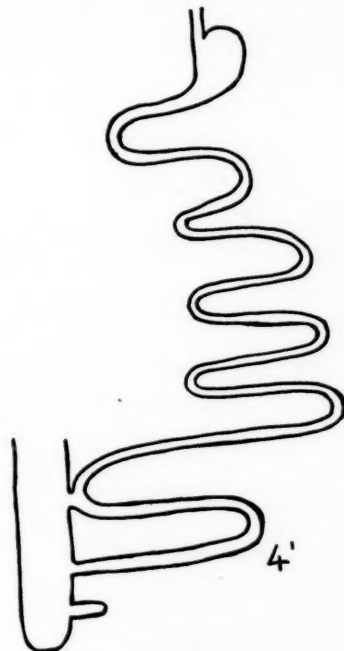


FIGURE II.

Case III.

A female patient, aged 34 years, presented herself in November, 1959, when she complained of incapacitating diarrhoea of three years' duration. She had been well until 1948, when she had had an ectopic pregnancy. In 1949 she had undergone a hysterectomy for fibroid tumours. Between 1949 and 1956 she had had five operations for intestinal obstruction. She was told that the last operation in that series entailed a short-circuiting of the small bowel. Ever since that operation she had had diarrhoea with up to 20 bowel motions per day. At first the faeces contained mucus and flecks of blood, but they soon became yellow, frothy and offensive. Despite an immense appetite she lost 50 lb. in weight, and became weak and lethargic. Her tongue was red and painful. For six months prior to presentation she had been treated by a local physician with liver injections twice a week and multivitamin injections for the presumed diagnosis of ulcerative colitis.

Examination of the patient revealed wasting, generalized brownish pigmentation of the skin, a magenta tongue and a scarred, distended abdomen. Sigmoidoscopic examination to 25 cm. revealed normal bowel mucosa. A provisional diagnosis of blind-loop syndrome was made. Investigations gave the following results. The haemoglobin value was 14.4 grammes per 100 ml. A blood film showed anisocytosis and polychromasia. The total serum protein content was 7.5 grammes per 100 ml. (albumin 4.0, globulin 3.5 grammes per 100 ml.). The serum calcium content was 5.3 mEq/l. The faecal fat excretion was 96 grammes in 24 hours. The result of a xylose

tolerance test was normal. A barium-meal and follow-through X-ray examination showed no sign of a blind loop.

Three days after the barium studies a small bowel obstruction occurred, which responded to conservative therapy. In view of this complication, it was decided to proceed with laparotomy, which was performed by Mr. James Guest in November, 1959. This revealed multiple loops of ileum, bound together by adhesions which were impossible to separate. These loops were excised, 6 ft. of jejunum and proximal ileum being left, and an end-to-end anastomosis of the ileum to the ascending colon was performed. Dissection of the operative specimen showed an old ileo-caecal anastomosis with an enteroenterostomy proximal to it (Figure III). Bacterial

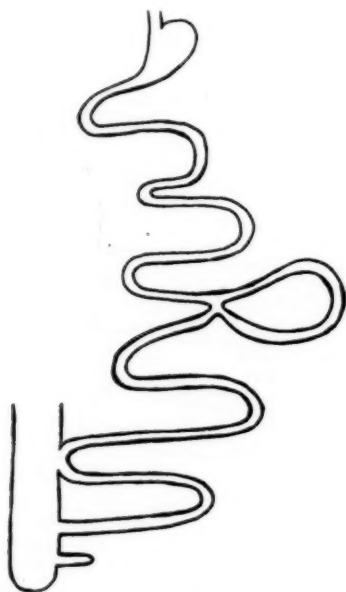


FIGURE III.

analysis of various segments of the bowel at operation showed abnormal faecal flora in cultures from the lower part of the jejunum and the blind loop (Table I).

When reviewed one year later, the patient felt well. She had only two yellowish-brown, semi-formed motions a day, with very occasional bouts of diarrhoea up to five motions a day. She had gained 17 lb. in weight. General examination revealed no abnormality. Blood examination showed an occasional macrocyte. A faecal fat estimation showed 15.6 grammes in the first 24 hours and 23.6 grammes in the second 24 hours.

Discussion.

Incidence.

Halstead *et alii* (1956) reported that 78 cases of the blind-loop syndrome had been recorded in the world literature, of which 32 followed intestinal surgery. Only one-fifth of these were associated with steatorrhoea.

Clinical Features.

Common modes of presentation of this syndrome include colicky abdominal pain, diarrhoea, weight loss and multiple vitamin deficiencies. Macrocytic anaemia is usually present, and is due to deficiency of vitamin B₁₂ and/or folic acid. Vitamin B group deficiencies often produce glossitis. Neurological abnormalities are rare. Steatorrhoea occurs in about one-fifth of cases, and usually follows either short-circuit operations or diseases diffusely

affecting the bowel wall. It may lead to tetany, osteomalacia or haemorrhage owing to deficiency of the fat-soluble vitamins. Diarrhoea is sometimes complicated by excess loss of sodium and potassium, resulting in marked muscle weakness. Faecal loss of nitrogen can produce hypoproteinaemia and oedema. Clubbing of the fingers may be an associated finding.

TABLE I.
Bacterial Analyses on Operation Specimens from Case III.

| Specimen. | Bacterial Flora. |
|-----------------------|---|
| Stomach contents | Scanty oral flora: <i>Streptococcus mitis</i> ±, <i>Staphylococcus lactis</i> , <i>Neisseria</i> , yeast. |
| Upper part of jejunum | No growth. |
| Lower part of jejunum | Profuse faecal flora: <i>Bacteroides</i> + + +, <i>Bacterium coli</i> , Type 1 +, <i>Klebsiella pneumoniae</i> +, <i>Strep. mitis</i> +, yeast ±. |
| Blind ileal loop | Profuse faecal flora: <i>Bacteroides</i> + + +, <i>Bact. coli</i> Type 1 +, <i>K. pneumoniae</i> +, yeast ±. |

Diagnosis.

In making a diagnosis of this syndrome, the most important thing is to suspect its presence. Chronic diarrhoea in a patient with multiple abdominal scars is suggestive. A careful history may disclose the presence of steatorrhoea as shown particularly in our third case; this patient was treated for six months for ulcerative colitis. Quantitative estimation of fat in a 24-hour specimen of faeces may be sufficient to diagnose steatorrhoea if the value exceeds 6 grammes of fat with the patient on a normal diet. However, in order to exclude the diagnosis, it is wise to collect specimens over a 72-hour period, and at a time when the patient is having frequent motions.

In the absence of metabolic disturbances such as thyrotoxicosis or diabetes mellitus, weight loss in association with chronic diarrhoea draws attention to the possibility of malabsorption, particularly if the food intake is adequate. This was evident in our third case, in which there was a weight loss of 42 lb. in six months in spite of a voracious appetite.

It is interesting to note that the oedema was the presenting symptom in the first case, despite normal hepatic and renal function. As was mentioned earlier, excessive faecal loss of nitrogen from diarrhoea may cause hypoproteinaemia. The low serum albumin level in this case was restored to normal within a month of operation.

Badenoch (1958) regarded macrocytic anaemia as a diagnostic feature of the blind-loop syndrome. This has not been our experience. Because of the prevalence of multivitamin therapy today, macrocytic anaemia is often absent; but this should not preclude further search in a patient with other features of the syndrome. If it is present, helpful diagnostic aids include a fractional test meal examination revealing acid in the stomach, and a Schilling test using ⁵⁷Co-labelled vitamin B₁₂. The latter shows no increase in the uptake of vitamin B₁₂ from the intestine when intrinsic factor is given with the test dose, but in the presence of a blind loop, uptake is increased after a course of a broad-spectrum antibiotic such as tetracycline (Halstead *et alii*, 1956; Scudamore *et alii*, 1958).

Treatment.

Conservative measures may temporarily control most features of the blind-loop syndrome. These include supplements of protein, calcium, B group vitamins and the fat-soluble vitamins. It is wise to administer both vitamin B₁₂ and folic acid in all cases. Bowel flora may be altered by a course of one of the tetracyclines resulting in alleviation of symptoms, but long-continued therapy has well-known complications.

If a blind loop is suspected in a patient with a past history of abdominal operations thought to include anasto-

motile procedures, laparotomy should be undertaken despite the lack of confirmation by barium studies, and provided the patient's general condition is suitable. For all patients submitted to surgery, careful pre-operative preparation is essential and should include vitamin therapy by injection, and restoration of fluid and electrolyte balance. Protein levels are restored after operation because nitrogen loss is reduced. Response to operation may be dramatic, as is shown by our first and second cases, in which normality of bowel habit was restored in the first week, and normal protein levels were restored within one month. In our third case, the symptomatic relief was very great. The patient's weight gain of over 21 lb. and loss of the signs of malnutrition were evidence of improvement. Persistent steatorrhoea is due to the fact that only 8 ft. of small bowel were left at operation. However, this patient illustrates the fact that, if at operation it is impossible to restore normal continuity of the bowel utilizing the blind loop, it is better to accept a shorter intestine than to leave the blind loop.

Pathogenesis.

The pathogenesis of the blind-loop syndrome is still uncertain. Stagnation of the contents of the small intestine leads to proliferation of an abnormal flora. In health, this area of the gut is either sterile, or contains only a scanty flora of oral type. Control of the diarrhoea, steatorrhoea and anaemia of the blind-loop syndrome by antibiotics shows that the condition is intimately related to this abnormal bacterial growth. Furthermore, restoration of normal anatomy results in the elimination of this flora and cure of the condition.

In our third case, culture of aspirates taken at operation revealed a profuse flora of faecal type in the lower jejunal and ileal loops. However, the exact mechanism by which organisms cause these complications is still a matter for research.

Frazer (1949) postulated that production of irritant fatty acids by the bacterial decomposition of starch and split fats in the diet could produce diarrhoea and malabsorption. Sammons *et alii* (1956) demonstrated that certain bacteria could synthesize fat.

The macrocytic anaemia has been explained by various theories, including failure of intestinal synthesis of folic acid, and impaired absorption of intrinsic factor or vitamin B₁₂, because of either steatorrhoea or bacterial competition for folic acid and/or vitamin B₁₂. Of these, Badenoch (1958) considered bacterial competition for the vitamins the more likely.

Cameron, Watson and Witts (1949) reproduced the blind-loop syndrome experimentally by operations resulting in isoperistaltic blind loops of small intestine in rats. Faecal flora soon grew, but chemotherapy controlling it resulted in alleviation of the signs of the syndrome, including macrocytic anaemia.

Conclusion.

In concluding the discussion of these cases, we wish to emphasize the real dangers associated with blind loops produced by anastomotic operations involving the small intestine. The only indications which seem to justify such procedures are circumstances in which they are life-saving because of the patient's grave condition, or in which the prognosis of the underlying disease is poor. If creation of a blind loop is necessary, appropriate substitution therapy must be given, in order to avoid the complications of malabsorption.

Summary.

The features of the blind-loop syndrome are outlined, and certain of them are discussed in the light of three case reports.

Emphasis is laid on the dangers associated with blind loops produced by anastomotic operations involving the small intestine.

References.

- HALSTEAD, J. A., LEWIS, P. M., and GASSTER, M. (1956), "Absorption of Radioactive Vitamin B₁₂ in the Syndrome of Megaloblastic Anaemia associated with Intestinal Stricture or Anastomosis", *Amer. J. Med.*, 20: 42.
- BADENOCH, J. (1958), "The Blind Loop Syndrome", in Jones, F. A. (1952), "Modern Trends in Gastroenterology", Butterworth, London: 231.
- SCUDAMORE, H. H., HAGEDORN, A. B., WOLLAEGER, E. E., and OWEN, C. A., JUN. (1958), "Diverticulosis of the Small Intestine and Macrocytic Anaemia with Report of Two Cases and Studies on Absorption of Radioactive Vitamin B₁₂", *Gastroenterology*, 34: 66.
- FRAZER, A. C. (1949), "Fat Metabolism and the Sprue Syndrome", *Brit. med. J.*, 2: 769.
- SAMMONS, H. G., VAUGHAN, D. J., and FRAZER, A. C. (1956), "Synthesis of Long-Chain Fats by Bacteria Isolated from Human Faeces", *Nature*, 177: 237.
- CAMERON, D. G., WATSON, G. M., and WITTS, L. J. (1949), "The Experimental Production of Macrocytic Anaemia by Operations on the Gastrointestinal Tract", *Blood*, 4: 803.

Reviews.

Origins of Alcoholism. By William McCord and Joan McCord with Jon Gudeman; 1960. London: Tavistock Publications Limited. 8½" x 5½", pp. 194. Price: 55s. 6d.

THE authors commence this book with the words of Omar Khayyám: "While you live, drink! for, once dead, you shall never return." This is appropriate in a work which sets out to find the reason why so many men reach a stage of no return and are forever dependent upon alcohol.

The book deserves close study. It is based on a remarkable Cambridge-Somerville youth study of Cambridge, Massachusetts. In 1935 a carefully matched series of 325 "normal" and "predelinquent" boys were selected. It was decided that half of these would receive regular medical and educational assistance, whereas the others would have no direction from the centre. All the boys were closely observed by a staff of well-trained councillors, who had the services of specialists, psychiatrists and psychologists at their call. The records were kept meticulously until 1939, when war depleted the ranks of the observers and the survey ceased.

Professor and Mrs. McCord, of Stanford University, realized that chance had given them a unique opportunity to study the causation of alcoholism. The survey was carefully documented and dealt with the whole life history of boys who were not alcoholics. As more than twenty years had passed since its inception, a follow up of the careers of the boys might give information as to why some of them had become alcoholics. Most importantly, the Cambridge-Somerville survey was unbiased and factual.

It was found that 29 of the treatment group and 22 of the controls had become alcoholics. The rates are summarized thus:

| | Treatment Group. | Control Group. |
|-------------------------------------|------------------|----------------|
| Alcoholic, non-criminal | 11 | 10 |
| Alcoholic, criminal | 18 | 12 |
| One-arrest drinker, non-criminal .. | 10 | 12 |
| One-arrest drinker, criminal | 14 | 10 |
| Criminal, non-alcoholic | 44 | 44 |
| Neither criminal nor alcoholic .. | 158 | 167 |

The criminal ratio was studied, since it revealed differences in aetiology.

The authors devote a chapter to current theories of alcoholism, concerning *inter alia* nutrition, glandular disorder, heredity, Freudian and Adlerian psychology, suicidal tendencies, homosexuality, race and social position. Each, viewed in relation to the cases of the series, is found insufficient to cover the facts, but of the welter of data which are available from the survey, two features are predominant in the alcoholic's life story. First, there is frustration of the normal urge to dependency. Secondly, there is lacking a clear specification of the masculine rôle, with a resultant confusion in self-image. As a result, the individual resolves his conflicts behind a façade. He must be aggressive, outwardly self-confident, highly independent. In other words, the potential alcoholic accepts the American stereotype of masculinity and then plays this rôle to the hilt. We would assume that his choice of an independent self-image involved the suppression of dependency desires. Thus, by becoming a highly independent male, he achieves

a temporary resolution of his disturbing conflicts. Alcohol presents a major solution. It gives warmth and omnipotence. Dependency is satisfied. The rôle image of manly independence is achieved.

The foregoing brief summary does not do justice to the masterly array of evidence upon which the results are based. The rôle of the mother and father is carefully analysed in the light of the case histories. Significantly positive maternal influences in the genesis of alcoholism were found to be maternal alternation between active affection and rejection, maternal escapism, deviancy, denigration of the mother by the father, antagonistic relationships between parents and maternal rejection of her rôle.

In connexion with rôle confusion of the child, alcoholism occurred least frequently when the child was expected to have high standards both in school work and in domestic chores. Alcoholism was high when the child was given no responsibilities. Criminality, in contradistinction to alcoholism, tended to occur with complete rejection or indifference by parents, with maternal over-punitiveness and with absence of the father.

The authors conclude on a hopeful note:

If alcoholism is caused by early familial experiences, there is hope that our society may find the means to eliminate those influences that doom so many Americans to a life of alcoholic madness.

This book should be read by every practitioner who has dealings with alcoholics or is interested in alcoholism as a major sociological problem in Australian life.

Assessment of the Activity of Disease. By J. S. Lawrence, M.D., M.R.C.P.; 1961. London: H. K. Lewis & Co. Ltd. 34" x 6", pp. 260 with illustrations. Price: £2 2s. net (English).

The scope of this book is perhaps more limited than the title would suggest. In it, the author in fact sets out to discuss in detail some of the relatively simple laboratory procedures which may be employed to assist in the assessment of the activity of inflammatory or tissue-destructive processes. In the first part of the book, the author discusses such things as leucocyte counts, plasma-protein patterns, the erythrocyte sedimentation rate and plasma viscosity from a semi-theoretical standpoint, and attempts to review presently available biochemical and physico-chemical information relating to these tests. Various methods of performing these tests are described. In the second part of the book the application of these various tests to a large number of disease processes is described.

This book contains an extraordinary wealth of information about these commonly used aids to diagnosis, management and prognosis. The theoretical section could be criticized, in that the information has been presented in a somewhat uncritical fashion, so that the reader is left in some confusion and doubt as to what is the present consensus of opinion. This is particularly marked in the section dealing with the effect of anaemia on the erythrocyte sedimentation rate. The applied section is also rather factually overwhelming, and a good deal of it smacks of the "collector's piece" approach—for example, page 168: "In G.P.I. the E.S.R. is always raised during an apoplectic attack becoming less during remissions."

This is not a very readable book, but it does contain a remarkable volume of reference material of value to any physician.

The Person Symbol in Clinical Medicine: A Correlation of Picture Drawings with Structural Lesions of the Brain. By Robert Kohn, M.D.; 1961. Springfield, Illinois: Charles C. Thomas; Oxford: Blackwell Scientific Publications Ltd. 10" x 6½", pp. 212, with illustrations. Price: 80s. (English).

This is a typical American stylized monograph. It is presented with an extensive introduction, itemizing in some detail those considerations and tests that might have some bearing on the subject. The theme of the study is that picture drawing is, in part, an expression of the innate body-image concept derived from internal and external bodily experiences. The material is obtained by the request to "draw a picture of a person, front view, the entire person".

In order to give some basis for interpreting the significance of such drawings, the author shows typical drawings by children, illustrating the evolution and increase in complexity of the drawings with age. Each drawing—and there are a great many illustrations—is accompanied by a

short clinical description, neurological study and electroencephalographic tracing. In the adult it is particularly noticed that there is a predominant stylistic pattern, which is only partly modified by disturbed brain function. Also illustrating this fact is that every great artist has his own particular style.

It is stated that certain physical and mental states appear to delay the development of the personal symbol, and that disturbances of brain function—for example, by alcoholism or hemianopia, are associated with a disturbed picture. The person symbol tends to deteriorate with the progress of an illness and to run parallel with the clinical recovery. All through, however, the drawing retains the stylized quality that proclaims the individual.

It is recognized that disturbed pictures may be produced by individuals who show no clear clinical or electrical evidence of generalized brain disturbance. However, there is a significant correlation between the personal symbol drawing and the clinical findings. It is suggested also that asymmetrical drawings may be a sensitive test for visual field defect and for spatial dysfunction.

This is an interesting study, thoroughly examined and having some significance from the clinical point of view. It would be useful particularly where painting and drawing are used as media of expression.

New Soviet Surgical Apparatus and Instruments and Their Application. Edited by M. G. Anan'yev and translated from the Russian by J. B. Elliott; 1961. Oxford, London, New York, Paris: Pergamon Press. 8½" x 5½", pp. 222 with a few illustrations. Price: 80s. net (English).

This most interesting and often instructive book describes the function and achievements of the Scientific Research Institute for experimental surgical apparatus and instruments in the U.S.S.R. As one might have imagined, the Soviet decided to centralize an institute for the mass production of standard instruments of sound design and structure, while at the same time developing new prototypes. Some of the directions into which their inventiveness has been guided are described and illustrated. Obviously great emphasis has been placed on the production of stapling machines, especially in the field of arterial surgery, and for intestinal anastomosis—the idea being that by equipping small centres which may not have surgeons of sufficient technical experience to use safely the traditional methods, they would greatly reduce the morbidity rate from such occasional operations as arterial anastomoses, and give a greater safety factor in gastrointestinal resection. It is unlikely that the highly developed hospitals of the western world, with well-trained technical staff, will need such complicated measures; but there is little doubt that in the context of the Soviet Union they will find an established place.

Possibly the most refreshing feature of the book is the simplicity and honesty of its presentation, and despite many spelling and grammatical errors, it gives one the rare opportunity of studying Soviet surgical science. Many of the chapters are devoted to the preservation and grafting of whole organs, and many of the techniques used will be new to the average surgical reader.

Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"Human Pituitary Gonadotropins: A Workshop Conference", edited by A. Albert, M.A., Ph.D., M.D.; 1961. Springfield, Illinois: Charles C. Thomas; Oxford: Blackwell Scientific Publications. 9" x 6", pp. 434 with figures. Price: £6 14s. (English).

"Psychotherapeutic Techniques in Medicine", by Michael and Enid Balint; 1961. London: Tavistock Publications. 8½" x 5½", pp. 228. Price: 21s.

"The Fire of Life: An Introduction to Animal Energetics", by Max Kleiber; 1961. New York, London: John Wiley and Sons Inc. 9" x 5½", pp. 474, with illustrations. Price: \$11.50.

"Stroke Rehabilitation: The Transactions of a One-Day Conference Held at The Livery Hall, Guildhall, London, June 22, 1961", Chairman, C. Bruce Perry, M.D., F.R.C.P.; 1961. London: The Chest and Heart Association. 8" x 5", pp. 80, with illustrations. Price: 10s. 6d.

The Medical Journal of Australia

SATURDAY, DECEMBER 2, 1961.

TRIALS OF LIVE POLIOVIRUS VACCINES.

THOUGH we have only recently¹ reviewed in these columns the background of the development of poliovirus vaccines and the relative merits claimed by the advocates of inactivated and of live attenuated vaccines, there is still room for further exploration of the subject, which is today an extremely topical one. While our previous article was in the press we received a copy of *The Lancet* with a leading article on vaccination against poliomyelitis,² in which the writer took a somewhat cautious view of the use of orally administered live vaccines, and concluded: "The situation does not demand a radical reversal of policy with a new mass campaign. It seems reasonable to persevere with killed vaccines of adequate potency. . . ." We have now received a copy of the *British Medical Journal* containing the report³ of the Public Health Laboratory Service to the Poliomyelitis Vaccines Committee of the Medical Research Council on a trial of living attenuated poliovirus vaccine. In a leading article published earlier this year,⁴ the *British Medical Journal* had previously discussed the possibility of replacing in Britain the Salk inactivated poliomyelitis vaccine by the Sabin attenuated orally administered vaccine, "not merely to counteract an epidemic but for general immunization", and had concluded that the Sabin orally administered vaccine was a safe and effective prophylactic. In the issue containing the report of the Public Health Laboratory Service's trial, the lessons of this trial are discussed,⁵ and the conclusion is repeated "that oral poliomyelitis vaccine offers the greatest possibility of completely eliminating poliovirus as a human pathogen provided proper safeguards are taken in its manufacture and careful surveillance of the community is maintained". A further rider is added that it is of the utmost importance for the vaccine to be used in a correct manner.

It is clear that an interesting stage has been reached in the development and testing of the poliomyelitis vaccines, and it may be useful to give further consideration to some recent reports of trials with the Sabin vaccine. Of the three orally administered vaccines against poliomyelitis which have been developed by different groups of

workers, that initiated by A. B. Sabin and his colleagues is the one which has been most widely used and is the one usually considered in discussions of orally administered live attenuated poliomyelitis vaccine (variously referred to as "oral vaccine", "live attenuated vaccine", "live vaccine" or "attenuated vaccine"). The report by Sabin and others⁶ on the first community-wide use of this vaccine in a large American city (Cincinnati) is therefore of particular interest, and contains some important discussion about the practical aspects of the large-scale use of oral vaccine. The Cincinnati programme was undertaken with the avowed intention of finding out "whether the voluntary public acceptance of the new oral polio vaccine would be sufficiently great to eliminate poliomyelitis from the city". It may be recalled that one of the main advantages claimed in favour of the oral vaccine is that it confers intestinal resistance to infection, whereas the Salk vaccine, while conferring immunity from systemic infection with the virus, does not prevent it multiplying in the gut, and therefore permits the virus to continue circulating in the community. The hope of eliminating poliomyelitis therefore lay in breaking the chain of transmission by administering the vaccine to as many people as possible, regardless of the number of doses of Salk vaccine they might have had, with special emphasis on pre-school children, who are considered to be the most important spreaders of the poliovirus. In order to evaluate the results of the campaign an extensive series of investigations was undertaken to ascertain such things as the extent of previous immunization with Salk vaccine among different groups in the community, the immune status of pre-school children just before the programme was launched, the antibody response to oral vaccine, the spread of poliovirus from vaccinated to unvaccinated persons and other related matters. It was planned to give the vaccine in three doses at monthly intervals, the first to contain Type 1 vaccine, the second to contain Type 3 vaccine, and the third to contain Type 2 vaccine. The reason for this was to avoid interference between different types of virus administered at the same time. (However, the authors of the report of the Public Health Laboratory Service trial³ have declared in favour of giving three doses of mixed vaccine at similar intervals, the rationale being that if one type fails to establish itself when the first dose is taken, it will be able to establish itself subsequently, when the host rejects the types to which immunity has been acquired. This scheme has also been found to work well in practice.) Sabin and his colleagues consider it important, in any community-wide programme, that each type of vaccine should be administered in the shortest possible time for two main reasons: (i) to avoid interference between different types; (ii) to create simultaneous widespread immunity so as to break the chain of transmission of any "wild" viruses of that type which might be circulating in the community at the time. The timing of such a campaign is important. The organizers of the Cincinnati campaign considered it important to complete their campaign by the middle of the summer, before the usual seasonal rise in the incidence of poliomyelitis took place. There are various reasons why this is important, but one is that in the late summer there is

¹ *Med. J. Aust.*, 1961, 2: 559 (September 30).

² *Lancet*, 1961, 2: 586 (September 9).

³ *Brit. med. J.*, 1961, 2: 1037 (October 21).

⁴ *Brit. med. J.*, 1961, 2: 293 (July 29).

⁵ *Ibidem*, page 1072.

⁶ *Amer. J. Dis. Child.*, 1961, 101: 546 (May).

also a big increase in the prevalence of other enteroviruses and that these can interfere with the establishment of the attenuated polioviruses and so prevent the acquisition of immunity. In the Cincinnati campaign this was not an important factor, as the number of other enteroviruses circulating at the time was insignificant, but in an earlier campaign in Mexico⁷ Sabin and his colleagues had found that about 50% of children were excreting enteric viruses of one sort or another when the campaign began.

In the event, attenuated virus was given to over 67,000 pre-school children and 111,000 school children in Cincinnati and adjacent areas. In Cincinnati itself, 73% of pre-school children and 79% of school children were so treated. A point of some interest was the fact that though the Salk vaccine had been in use for four years before the Sabin vaccine campaign was launched, the proportion of children who had received three or more doses of Salk vaccine was 73% in the upper and middle income group, but only 34% among those who came to the clinics in the poorest neighbourhoods; and the records of 24,000 parents of pre-school children showed that 46% of the fathers and 24.5% of the mothers had not received even a single injection of Salk vaccine. The results of the campaign clearly came up to the expectations of its sponsors. Of the sample of pre-school children whose serum showed no antibody to polioviruses before receiving the Sabin vaccine, 100% developed antibody to all three types of poliovirus after they had ingested the three doses. There was also a marked booster effect on antibody level in children who had previously received Salk vaccination. During the eight months which followed the start of the campaign (and which included what would normally have been the peak months for poliomyelitis) there were no cases of aseptic meningitis or paralytic poliomyelitis due to poliovirus in the areas in which the campaign had been carried out, except for one man who developed paralytic poliomyelitis 10 days after his arrival from another State. Corresponding figures for the previous four years were 34 cases in 1956, 9 in 1957, 17 in 1958 and 30 in 1959. A point of minor interest is that, in order to avoid any possible complicating situations in connexion with tonsillectomies and adenoidectomies, the health department had recommended that elective operations in this field should not be performed on vaccinated children or their associates for at least two weeks after they had received the vaccine. As the distribution of vaccine was highly synchronized it was possible to check hospital records to see whether this advice had been followed; it was clear that it had been totally ignored by the local medical profession, and that no harm had resulted. The report on the Cincinnati campaign contains a mass of carefully sifted data which makes it required reading for anyone closely concerned in the problems connected with the use of oral poliomyelitis vaccines.

In contrast, the Public Health Laboratory Service's trial in Britain was a field trial on quite a modest scale, the vaccine having been administered to 409 selected children, in widely scattered localities, in the six to 12 months age group. Seventeen different public health laboratories cooperated in this trial, the main object of which was to

compare the efficiency of three different dose schedules. These were (i) a single dose of trivalent vaccine, (ii) three doses of trivalent vaccine at four-week intervals, and (iii) three doses of monovalent vaccine at four-week intervals, in the order Type 1, Type 3 and Type 2. The response to Type 2 vaccine was excellent in all three groups, but in the first group only about 50% of the infants showed antibody response to Types 1 and 3. As already noted, the authors of the report on this trial declared themselves in favour of the second dose schedule; antibody response in the group on this schedule was close to 100% for all three types of vaccine, though the response in the third group was only slightly less. In general, the British trial may be said to have confirmed the finding of previous trials conducted elsewhere and, apart from the information on dosage schedule, the English trial tends mainly to highlight the fact that use of oral poliomyelitis vaccine in the United Kingdom is still in the experimental phase.

The history of the development of the Sabin vaccine may be roughly summarized as follows. Prior to 1958 its use had been limited to a few preliminary trials in small isolated communities. In 1958 the first proper field trials were carried out in a few countries. The year 1959 saw the launching of extensive field trials in which very large numbers of susceptible persons were involved in many countries. By 1960 the Sabin vaccine was being employed in community-wide and nation-wide campaigns on a very large scale indeed. The reasons why the less highly developed countries should have been the first to accept the Sabin vaccine is not hard to seek. While America, Canada, Britain and Australia were making a considerable investment, in terms of equipment and scientific manpower, in the effort to produce sufficient Salk vaccine for their own requirements, for the less developed nations the easily-distributed, self-multiplying Sabin vaccine was the only way of obtaining mass-immunization of their populations in a hurry. For the practically minded administrators of the Eastern European nations, trained to think in terms of benefit to the mass rather than of the interests of the individual, the economic advantages and administrative simplicity of the Sabin vaccine must have seemed conclusive. In the English-speaking nations, on the other hand, Salk vaccination was well under way while Sabin vaccine was still in a very experimental stage. After a decade of not inconsiderable poliomyelitis epidemics, the introduction of Salk vaccination on a big scale was everywhere followed by a dramatic fall in the incidence of the disease to an extremely low level. After such a spectacular victory, the question whether to use the inactivated vaccine of Jonas Salk or a live attenuated vaccine such as that on which Sabin was working, appeared to be conclusively settled, at any rate for many years to come. Even after some early successes with the Sabin vaccine, many must have thought that this might be all very well in underdeveloped countries, where administrative and other difficulties presented almost insuperable obstacles to the efficient use of Salk vaccination, but that in their own countries they were not going to risk any repetition of the Cutter disaster, which gravely embarrassed the first nation-wide use of the Salk vaccine in America. The bogey of increased neurovirulence after

⁷ *J. Amer. med. Ass.*, 1960, 173: 1521 (August 6).

repeated passage of attenuated strains was very real. However, after two years in which the incidence of poliomyelitis had been at an unprecedentedly low level, confidence in the Salk vaccine was first shaken by the series of localized poliomyelitis epidemics which occurred in various parts of the United States in the second half of 1959. Though of limited extent, these drew attention to one particular advantage claimed for the Sabin vaccines, namely, their ability to check the spread of wild polioviruses in the community if suitably deployed. Since then, the success which has followed the wholesale use of the Sabin vaccine in the Eastern European countries and elsewhere has made necessary a reassessment of the relative rôles of the two vaccines everywhere. The Salk vaccine has served Australia particularly well. The immunization coverage with this vaccine in Australia has been perhaps the best in the world—it certainly seems to compare favourably with some American statistics—and the potency of the Australian-made vaccine has undoubtedly been of the highest order. However, the recent Wollongong epidemic suggests that we should try to do even better. Decisions and events in other countries which have hitherto depended on the Salk vaccine will be watched with interest. The Commonwealth Minister for Health, Dr. Cameron, has recently set out³ quite sound reasons why the use of Salk vaccine should be continued in Australia, but the fact that someone is to be sent overseas to investigate the Sabin vaccine indicates that the Minister and his advisers have not closed minds on the matter.

Comments and Abstracts.

LEUCOTOMY IN ENGLAND AND WALES.

TWENTY YEARS AGO leucotomy for the treatment of mental disorder was introduced into the United Kingdom. Its use steadily increased to reach a peak in 1949, and between 1942 and 1954 some 12,000 leucotomy operations were performed in the psychiatric hospitals of England and Wales. A survey of the results of the operation in this period, made by G. C. Tooth and Mary P. Newton, has now been published.¹ The actual number of patients whom it was possible to include in the survey was 10,365, but it is not thought that the survey population was biased by any of the excluded groups except perhaps for a certain number of patients, probably neurotics and for the most part operated on in general hospitals, amongst whom the results of leucotomy might be better than the average for mental hospitals.

The proportions of patients in the main diagnostic groups were as follows: schizophrenics, 64%; affectives, 25%; patients with other diagnoses, 11%. Women exceeded men in the proportion of three to two, and there was a preponderance of women in each of the diagnostic groups. Of all patients 36% were under the age of 35 years, 60% were aged between 35 and 64 years, and 4% were aged 65 or over at the time of operation. In the schizophrenic group the proportion of men aged under 35 years was 56% compared with 41% of women. The corresponding figures for the affective group were 5% for men and 8% for women. In only 14% of patients was the operation performed within two years of the onset of illness; 41% of patients had been ill for more than six years before

leucotomy was decided upon. The standard type of leucotomy operation was used in 84% of cases.

At the time of the survey 46% of the patients had been discharged from hospital, 45% were in hospital and 9% had died in hospital. The length of stay in hospital after operation before discharge varied considerably between the diagnostic groups; within the first year of operation 49% of affectives and 50% of those with other diagnoses had left hospital as compared with 20% of schizophrenics. A higher proportion of patients left hospital in the later years covered by the survey, and this is considered to be due to a general trend unconnected with leucotomy.

Of all the patients alive at the time of the survey, clinical gradings were obtained for 6410, of whom 74% were still in hospital and 26% had been followed up after discharge. By amalgamating the grading scales for those in hospital and those discharged, including estimates for patients not followed up, it was found that 36% of men and 44% of women were said to have been at least greatly improved after operation; 2% of both men and women were worse; 4% of men and 3% of women had died, their deaths being wholly or partly due to the operation. The remaining patients had not significantly altered their status. In accordance with expectation, improvement was greatest among the affective group and least among the schizophrenics. In each diagnostic group women did slightly better than men. Among the women schizophrenics, the younger patients did somewhat better than the older, but the reverse was true for the men. Also among the schizophrenics, those who had been ill for shorter periods showed the greater measure of improvement, but this was not apparent in the case of the affectives or those with other diagnoses. In all, 21% relapsed after operation, and the relapse rate was slightly higher for schizophrenics. Relapse occurred more frequently in the younger age groups in each diagnostic category; 38% of relapses were recorded for patients under the age of 25 as compared with 15% for those aged 55 and over. Amongst schizophrenics, relapse was commoner in those who had been ill for shorter periods before operation, but was very rare in those in the other diagnoses group who had been operated upon within two years of the onset of illness.

The proportion of patients who developed persistent epilepsy after leucotomy was 1.3%. Serious side effects after leucotomy were reported in 3.1% of all patients, and these effects were observed more frequently in those over the age of 55 than among younger patients. Tooth and Newton point out that although, because they are so difficult to assess effectively, the survey throws little light on the incidence of undesirable side effects, it is likely that they, more than any other factor, account for the falling off in recent years in the use of leucotomy. It is claimed that advances in surgical technique have reduced the likelihood of these post-operative sequelæ, but the number of patients in the survey who had been treated by the less radical methods is too small to enable worthwhile comparison to be made between the results of these and the older techniques.

It is to be noted that during the period of this survey the numbers of patients undergoing leucotomy steadily increased, and from 1948 to 1955 over 1000 patients yearly underwent the operation; but by 1959 the number had fallen to 400. The results recorded in this survey throw little light on the reasons for the decline in popularity of this form of treatment, nor can they, as Tooth and Newton point out, afford a measure of the absolute value of leucotomy or be used as the basis for comparison with other forms of treatment. For these purposes a control experiment would be required. However, it seems reasonable to accept the statement that the decline in use of leucotomy is almost certainly due to appreciation of the fact that the operation carries with it a peculiar and unpredictable risk, the effects of which may be irreversible, and that since 1955 drug treatments have provided a safer means of obtaining comparable results. Tooth and Newton state that beyond doubt many of the distressing symptoms of mental illness can be relieved by leucotomy, and the patient is thereby set free to come to terms with life. But

² MED. J. AUST., 1961, 2: 846 (November 18).

¹ "Leucotomy in England and Wales 1942-1954". Ministry of Health Reports on Public Health and Medical Subjects No. 104; 1961. London: Her Majesty's Stationery Office. 6" x 9½", pp. 36. Price: 2s. 6d. (English).

it is also beyond question that in some cases relief from suffering has been bought at the price of accepting a level of existence qualitatively different from and usually below that which the patient had enjoyed before the onset of illness. This kind of bargain, they continue, has often to be struck in medical practice; for example, the decision to amputate or establish a permanent colostomy is taken with the full understanding that it will impose on the patient a less agreeable and usually more restrictive life; but the ability to adjust to it rests with the patient. Leucotomy, on the other hand, while relieving distress, can impair those faculties that make it possible for the patient to adjust to life and benefit from his new freedom. This fact, looked at from a purely functional point of view, coupled with the ethical misgivings related to the deliberate and irreversible alteration of a human personality, mostly in an unpredictable direction, makes it inevitable that an alternative should be sought. A number of at least partial alternatives have already come to hand; so it is unlikely that another series will be available in the future comparable with that surveyed by Tooth and Newton. Their report is perhaps destined to be an historical document.

WHO MALARIA STAMP CAMPAIGN.

"THE WORLD UNITED AGAINST MALARIA" is the slogan which millions and millions of little messages in the form of postage stamps will carry across the world, in waves of special issues, starting next April 7 and up to the end of 1962. Latest reports reaching WHO headquarters in Geneva indicate that 10 more special stamps will be issued, bringing up to about 60 the number of governments and territories which have already decided to issue special postage stamps devoted to the malaria eradication programme. Many more countries are expected to take part in this project. The various stamps will be far from uniform, since governments are at liberty to adopt the design of their choice. The united effort against malaria will, however, be illustrated by the emblem common to all stamps. This emblem shows in its upper part the globe as a symbol of world-wide cooperation under the auspices of WHO, and in the lower part the anopheline vector of malaria attacked by the Æsculapian staff.

Apart from issuing millions of stamps, some of them in more than one denomination, an increasing number of governments are making a further contribution to WHO's malaria eradication campaign by donating such stamps for philatelic sales. Official notification has also been received at WHO Headquarters in Geneva of further gifts in the form of related philatelic material such as first day covers, souvenir sheets, stamped cards, and so forth. In order to safeguard the dignity of this campaign, as well as to protect the interests of donor governments, and to ensure equal terms for all prospective buyers, WHO has concluded an agreement with a corporation which has agreed to sell at their face value all stamps contributed to WHO, through a specially established subsidiary called "Philatelic Agency for Malaria Eradication Postage Stamps, Ltd.". Income from the sale of stamps and other philatelic material will be placed by WHO into its Malaria Eradication Special Account, which is an international repository for funds contributed by governments, foundations, industry, labour organizations and the public to help finance WHO's malaria operations.

SHORTER ABSTRACTS.

GYNÆCOLOGY AND OBSTETRICS.

INTRAVENOUS PYELOGRAPHY PRIOR TO GYNÆCOLOGICAL OPERATIONS. J. S. Roden *et alii*, *Amer. J. Obstet. Gynec.*, 1961, 82: 568 (September).

The authors state that, at the University of Missouri Medical Centre, the Department of Gynecology has per-

formed routine screening intravenous pyelographic studies on all patients admitted for elective major gynecological operative procedures for a period of two years. Four hundred and fifty-five pyelograms were taken without significant reaction, and in 122 (26.8%) unsuspected pathological conditions were found. One hundred patients (21.9%) showed significant unsuspected renal abnormalities, while 29 (6.4%) were shown to have noteworthy extrarenal abnormalities. There were one patient with renal malignant disease, 24 with genito-urinary tract abnormalities, 17 with chronic pyelonephritis, 12 with renal and ureteric calculi, 32 with hydronephrosis and/or hydroureter, and 14 with the ureter deviated medially. The number of unsuspected incidental findings unrelated to the urinary tract was greater than that found by the coincidentally taken chest skiagrams. The authors also suggest that intravenous urography be included as a standard screening device for patients being prepared for elective major pelvic operations.

EFFECT OF PROGESTOGENS ON ENDOMETRIOSIS. H. L. Riva *et alii*, *Amer. J. Obstet. Gynec.*, 1961, 82: 109 (July).

The authors report the results obtained in the treatment with norethynodrel ("Enovid") of 123 patients diagnosed by culdoscopy and/or laparotomy as having endometriosis. The dosage given was gradually increased from 2.5 mg. to a total of 30 mg. per day. If breakthrough bleeding occurred in this amount, the dosage was increased by 10 mg. increments up to a maximum of 100 mg. if necessary. The average necessary dose for the entire group was 49.2 mg., and three patients were taking the maximum dose. At the completion of therapy, in most instances after six months, all patients were readmitted to hospital for culdoscopic examination, uterine dilatation and curettage, and reevaluation. In 81 patients reevaluated, the initial regression rate was 77.7%. Except in four instances, all patients were treated for at least six months. After an additional six months, these were again evaluated surgically. Only one patient was treated for longer than 12 months. Of 83 patients so evaluated after up to 15 months' continuous therapy, complete regression was obtained in 66 or 79.5%. The average duration of therapy was 6.3 months. With this type of therapy, regression of disease did not seem to be dependent upon its severity or upon the age of the patient. The drug produced effects similar to pregnancy, but with several disagreeable side effects, including irritability, nervousness and abdominal cramping. No definite evidence of androgenic effect was demonstrated. Twenty-eight patients were followed up for more than six months after completion of therapy, and recurrences developed in 17.8%. Menses resumed a normal ovulatory pattern after cessation of therapy. Pregnancy has since occurred in four patients, all of whom were previously infertile for periods of three to nine years. The authors consider norethynodrel to be a valuable adjunct in the treatment of endometriosis, especially for patients in whom it is desired to avoid major operative procedures.

CULDOSCOPY IN GYNÆCOLOGY. A. Peretz and M. Sharf, *Amer. J. Obstet. Gynec.*, 1961, 82: 582 (September).

The authors have performed over 400 culdoscopic examinations for various gynecological indications. Technically, the lithotomy position was preferred to the knee-chest position, and after the cannula had been inserted into the peritoneal cavity, carbon dioxide gas was allowed to flow in. General anaesthesia was used in most cases and as a rule the patients were discharged from hospital on the day after the examination. One hundred and eighty-four patients with sterility were investigated, as routine examinations had failed to reveal the exact lesions; 148 of these had occluded Fallopian tubes, as shown by salpingography and tubal insufflation, 15 had no anatomical or functional abnormality revealed by routine tests, and 21 were suspected of having genital tuberculosis. Patients being considered for tubal plastic operations underwent culdoscopy to determine the prospects for success. Culdoscopic findings sometimes contradict the results of insufflation and salpingography. The effect of modern antimicrobial therapy on tuberculosis of the genital organs can be visually assessed by the culdoscope. Fifteen cases of primary amenorrhœa and 35 cases of secondary amenorrhœa were investigated. Ovarian disease was found in 26 of the 40 cases. Sixty patients referred with a diagnosis of lower abdominal pain were investigated; retrograde menstrual bleeding was found in five cases, endometriosis in four, adhesions in 10, prolapse of a polycystic ovary in four, and chronic adnexitis in six. There

were no pathological findings in 33 cases. In a total of 45 cases of clinically suspected ectopic pregnancy, 14 were confirmed. Normal pelvic organs were seen in nine, while in the remaining 22, tumours, endometriosis or inflammatory changes were found. The examination could not be completed in 20 of the 404 patients, and in two cases there was retroperitoneal perforation of the rectum.

TREATMENT OF THE INCOMPETENT CERVICAL OS. M. Vitsky, *Amer. J. Obstet. Gynec.*, 1961, 81: 1194 (June).

The author postulates that the cervix weakened either congenitally or by trauma, with its axis directly and centrally lined with a relatively non-resistant vagina, lends itself to its own dissolution by the growth of the ovum within the confines of the uterus. Logically, then, any device which can alter this collineation so that the force is directed toward firmer bearings would do much to discourage this tragic waste. The Hodge or Smith pessary may have some merit in just such therapy, first by changing the inclination of the cervical canal, later by distributing the weight of the now growing ovum through the lower uterine segment onto the cul-de-sac, the vaginal floor and the retrosymphysal osteo-muscular structures. In addition, the tension exerted on the utero-sacral ligaments will have a "sling" effect on the anterior part of the cervix through their played continuity with the cervical fascia, thus compressing the cervical canal at least for the earlier part of the pregnancy. Three cases are presented. Out of 15 pregnancies, there were only four living infants, and these four live births apparently were effected by the procedure outlined.

VAGINITIS IN CHILDHOOD. L. A. Gray and E. Kotcher, *Amer. J. Obstet. Gynec.*, 1961, 82: 530 (September).

The authors state that, at birth, the vagina physiologically is thick, sheds glycogen and produces acid, but in two to six weeks it becomes thin and alkaline, when numerous bacteria invade it. Vaginitis occurs frequently in the prepubescent child with an atrophic vagina. In the few months or year before the menarche, the vagina becomes thick and again produces glycogen and acid. Discharge then may represent normal mucus or an adult type of infection. In a group of 92 prepubescent patients with thin vaginas and vaginitis, the gonococcus was cultured in 9.3%, *Trichomonas vaginalis* in 2.9%, *Shigella flexneri* P in 1.4%, and bacteria of various species found in the intestinal tract and nasopharynx in the majority. Foreign bodies were found in 1.6%. Oestrogenic hormone in various forms was used as treatment in 145 patients with thin vaginas, without oestrogenic effect. Of 27 patients, 24 developed thick vaginas with desquamation of large hexagonal epithelial cells and a complete disappearance of pus cells and symptoms. Seventeen patients were treated with suppositories containing mixed equine oestrogens, and 14 developed a full oestrogenic effect. In seven of these, there was recurrence of the vaginitis in the few months' follow-up. One hundred and one patients were treated with oestrogenic cream applied locally to the vulva and vestibule, with a cure in 70 and improvement in 19, whilst 13 showed no change or had not been followed sufficiently. Recurrence of vaginitis in degree commonly occurred, and retreatment with oestrogenic cream frequently was necessary. The authors state that the vaginitis disappears with the menarche, and after that time vaginitis, when present, simulates that found in the adult and is usually caused by *T. vaginalis* or *Candida albicans*.

URETHRAL CATHETER AS A CAUSE OF URINARY-TRACT INFECTION IN PREGNANCY AND PUERPERIUM. W. Brumfitt *et alii*, 1961, *Lancet*, 2: 1059 (November 11).

The authors have studied the incidence of urinary-tract infection in three groups of maternity patients. The first group consisted of 105 patients whose uneventful normal labour had not required catheterization, and urinary tract infection occurred in 4.7%. The second group comprised 110 patients with uncomplicated labour; each had had catheterization once, solely to obtain a specimen of urine for laboratory examination. The infection rate was 9.1%. The third group consisted of 105 patients who had all had complicated or difficult labours, and who had to undergo catheterization for obstetrical reasons. The infection rate was 22.8%. Detailed analysis of this group showed that catheterization for certain reasons, such as retention of urine during delivery or in the puerperium, was especially apt to be followed by infection (40.6%). On the other hand,

the risk was much smaller when the catheter was used before obstetrical procedures, such as the application of forceps (11.3%). Many patients found to have urinary-tract infections were completely free of symptoms or had only mild puerperal pyrexia. The classical symptoms of infection of the urinary tract were found in only eight of the 39 cases. Therefore, in many patients, the urinary-tract infection could be detected only by laboratory examination of the urine. The finding of more than 100,000 organisms per millilitre of fresh uncentrifuged urine was taken as evidence of active infection with multiplication of bacteria in the bladder. The majority (84.6%) of the infections were caused by organisms of the *Escherichia coli* species. The authors conclude that catheterization is unjustified as a means of obtaining urine for laboratory examination, since adequate information can be obtained from quantitative bacterial studies on properly taken mid-stream specimens of urine. When catheterization is unavoidable, subsequent examination of the urine is important for the early recognition and treatment of infection.

BACILLURIA IN PREGNANCY. G. C. Turner, *Lancet*, 1961, 2: 1062 (November 11).

The author states that there is increasing evidence that severe renal damage may be initiated by apparently trivial or even unrecognized infections of the urinary tract. In pregnancy, urinary-tract infections seem to be isolated episodes, and should receive more attention. The author has tested the statement of Kass, based on recent work on bacilluria in pregnancy, that it may be possible to select, before symptoms develop, some of the women who are especially likely to develop pyelitis. The clinical material consisted of 1500 patients attending the main ante-natal clinic in Aberdeen, and the findings were as follows. Of the 1500 women, 7% had asymptomatic bacilluria, in most cases caused by *Escherichia coli*. Of 108 women found to have asymptomatic bacilluria, 79 had been delivered when the paper was presented, and 49 of them had developed clinical symptoms of urinary infection. The author states that mid-stream specimens are adequate for the detection of bacilluria. Patients do not require special preparation. The specimens should be bacteriologically examined within three hours of collection. It is suggested that bacteriological examination of the urine should be included in routine ante-natal care.

PREGNANCY IN THE ABSENCE OF ADRENAL CORTICAL FUNCTION. W. H. Allemang, *Canad. med. Ass. J.*, 1961, 85: 118 (July 15).

The author reports six pregnancies in five patients with absent adrenal cortical function. Four of the patients had undergone bilateral adrenalectomy for Cushing's disease; the fifth was suffering from Addison's disease. Labour was normal in five of these patients, and one was delivered by Caesarean section at 34 weeks on account of progressive chronic pyelonephritis and fetal distress. The author reviews the literature on pregnancy associated with Addison's disease and Cushing's syndrome treated by bilateral adrenalectomy. The prognosis of pregnancy in untreated Cushing's syndrome is poor, although it is considered somewhat better than in untreated Addison's disease. The author considers that an increasing number of patients with adrenal cortical insufficiency will become pregnant and require joint management by the endocrinologist and the obstetrician. The case histories of four patients who had undergone bilateral total adrenalectomy for Cushing's syndrome followed through five pregnancies are given. All patients received adequate adrenal cortical steroid therapy to meet their needs. Only one patient presented major complications, a woman, aged 40 years, with long-standing hypertension and chronic pyelonephritis. The presence of a transverse lie and fetal distress at this labour resulted in delivery by Caesarean section. Complications of the puerperium noted in these patients included postural hypotension, oedema of the feet and hypertension, depressed renal function and bleeding from the bowel. The patient with treated Addison's disease had an uncomplicated pregnancy and delivery. During labour all patients were treated with hydrocortisone given parenterally; the dosage was gradually diminished and a change was made to oral therapy in the post-partum period. Periodic readjustment of the doses of adrenocortical steroids was necessary. The author concludes that no significant abnormality of labour or the puerperium was encountered in the absence of adrenocortical function when replacement therapy was properly regulated.

British Medical Association.

QUEENSLAND BRANCH: ANNUAL MEETING.

THE annual meeting of the Queensland Branch of the British Medical Association was held at British Medical Association House, 88 L'Estrange Terrace, Kelvin Grove, on September 2, 1961, Dr. P. A. EARNSHAW, the President, in the chair.

ANNUAL REPORT OF THE COUNCIL.

The annual report of the Council for the year ended June 30, 1961, was received and adopted. The report is as follows.

The Council has pleasure in presenting the sixty-seventh annual report of the work of the Branch for the year ending June 30, 1961.

Membership.

The membership of the Branch is 1449 plus seven honorary life members, as against 1368 and six honorary life members in 1960, making a total gain of 82. There are also 61 honorary associate members, 34 of whom were elected this year. Nineteen honorary associate members were elected to full membership on graduation.

The gains were: new members, 81; transfers from other Branches, 53; members reelected, 8; members reinstated, 2. The losses were: members transferred to other Branches, 44; deceased, 9; resigned, 6; struck off, 3 (owing to non-payment of subscription).

The following, by virtue of their fifty years' membership of the British Medical Association, have become honorary life members: Dr. N. J. Davis, Dr. Morgan Lane, Dr. N. W. Markwell.

Obituary.

It is with deep regret that we record the deaths of the following members: Dr. J. H. Bendeich, Dr. A. B. Carvosso, Dr. N. F. George, Dr. C. Humphrey Lloyd, Dr. G. W. Mason, Dr. B. Monz, Dr. C. P. Sapsford, Dr. E. Silberstern, Dr. J. L. Simmonds.

Council.

Twenty-three meetings of the Council, including two special meetings, have been held since June 30, 1960. Nineteen of these meetings were in the present Council year. Record of attendance is as follows:

| | |
|---|----|
| Dr. P. A. Earnshaw (President) | 21 |
| Dr. D. A. Dowling (President-Elect) ¹ .. . | 13 |
| Dr. P. W. Hopkins (Past President) .. . | 11 |
| Dr. J. F. Lee (Honorary Secretary) .. . | 22 |
| Dr. L. A. Little (Chairman of Council, Councillor) .. . | 21 |
| Dr. W. D. Friend (Honorary Treasurer, Councillor) .. . | 19 |
| Dr. E. W. Abrahams (Councillor) ² .. . | 13 |
| Dr. J. R. Adam (Councillor) .. . | 20 |
| Dr. B. N. Adsett (Councillor) .. . | 19 |
| Dr. N. C. Davis (Councillor) .. . | 18 |
| Professor D. Gordon (Councillor) ³ .. . | 14 |
| Dr. R. A. McCullagh (Councillor) ⁴ .. . | 6 |
| Dr. S. A. McDonnell (Councillor) .. . | 18 |
| Dr. I. G. McPhee (Councillor) .. . | 21 |
| Dr. R. Miller (Councillor) ⁵ .. . | 21 |
| Dr. K. S. Mowatt (Councillor) ⁶ .. . | 15 |
| Dr. R. F. O'Shea (Councillor) ⁷ .. . | 16 |
| Dr. H. S. Patterson (Councillor) .. . | 19 |
| Dr. Charles Roe (Councillor) ⁸ .. . | 20 |

¹ Elected September 1, 1961—overseas leave five meetings.

² Resigned March 10, 1961.

³ Overseas leave eight meetings.

⁴ Appointed March 24, 1961.

⁵ Federal Council, June 9, 1961.

⁶ Official and sick leave seven meetings.

⁷ Elected September 1, 1961—sick leave three meetings.

Scientific Meetings.

In addition to the annual general meeting, eight ordinary general meetings of the Branch were held, including the Bancroft Oration, Jackson Lecture, E. S. Meyers Memorial Lecture and four clinical meetings. The average attendance at the general meetings was 48. Details of the meetings are as follows:

July: "Melioidosis in North Queensland", Dr. R. A. Rimington (at Townsville).

September 1: "Some of the Non-Specific Inflammatory Diseases of the Small and Large Intestines", Sir William Morrow, D.S.O., E.D., Sydney (34th Bancroft Oration).

September 3: "Reminiscences of Medical Brisbane—Early Twentieth Century", Dr. A. S. Roe (30th Jackson Lecture).

September 16: "Colles' Fracture", Dr. G. A. C. Douglas (4th E. S. Meyers Memorial Lecture held in association with the University of Queensland Medical Society).

October: "Some Aspects of the Treatment of Diabetes Mellitus", Dr. Brian Hirschfeld (at Toowoomba).

November: Clinical meeting in conjunction with the Mater Misericordiae Hospital. A presentation and demonstration of various cases.

March: Clinical meeting held in conjunction with the Princess Alexandra Hospital Society.

June: Clinical meeting held in conjunction with the Brisbane Hospital Clinical Society. Demonstrations of cases and clinical exhibits were given.

Office Bearers and Councillors.

Vice-Presidents: Dr. John G. Wagner and Dr. Harold W. Horn.

The following office bearers were appointed by the Council for 1960-1961: Chairman of Council, Dr. L. A. Little (reelected); Honorary Treasurer, Dr. W. D. Friend; Chairman of Subcommittees, Dr. Charles Roe (reelected); Honorary Secretary of Subcommittees, Dr. R. F. O'Shea; Honorary Librarian, Dr. N. C. Davis.

Dr. D. A. Dowling was elected to the position of President-elect, Dr. John F. Lee was reelected Honorary Secretary, and, in accordance with the by-laws, the following were elected members of the Council for a period of two years, 1960-1962: Dr. J. R. Adam, Dr. E. W. Abrahams, Dr. Robert Miller, Dr. Keith S. Mowatt, Dr. S. A. McDonnell, Dr. R. F. O'Shea, Dr. H. S. Patterson.

Representation.

The Branch was represented as follows during the year: Council of the British Medical Association: Professor B. W. Windeyer.

British Medical Association, Representative Meeting, Sheffield, July, 1961: Delegates, Dr. M. W. Carseldine and Dr. J. J. Herron.

Federal Council of the British Medical Association in Australia: Dr. Robert Miller, Dr. Charles Roe.

Australasian Medical Publishing Company Limited: Dr. Alan E. Lee (director) Dr. H. W. Horn, Dr. J. G. Wagner.

Medical Assessment Tribunal: Dr. L. A. Little.

Medical Board of Queensland: Dr. F. W. R. Lukin, Dr. S. A. McDonnell, Dr. J. G. Wagner.

Medical Officers' Relief Fund (Federal), Queensland Committee: Dr. P. A. Earnshaw, Dr. S. A. McDonnell, Dr. W. H. Steel.

Federal Medical War Relief Fund, Local Committee of Management: Dr. J. G. Wagner (chairman), Dr. B. L. W. Clarke, Sir Kenneth Fraser, Dr. Charles Roe, Dr. W. H. Steel.

Medical Services State Committee of Inquiry: Dr. H. W. Horn, Dr. G. V. Hickey (senior), Dr. H. S. Patterson, Sir Kenneth Fraser.

National Safety Council of Australia (Queensland Division): Dr. S. A. McDonnell.

Physiotherapy Board of Studies: Dr. I. G. McPhee.

Post-Graduate Medical Education Committee: Dr. J. F. Lee, Dr. K. S. Mowatt, Dr. R. F. O'Shea.

Queensland Bush Children's Health Scheme: Dr. H. W. Anderson.

Queensland Bush Nursing Association: Dr. L. Bedford Elwell.

Queensland Health Education Council: Dr. K. S. Mowatt.
Queensland Hospitals Liaison Committee: President (Dr. P. A. Earnshaw), Professor D. Gordon.

Queensland Institute of Medical Research: Dr. D. A. Henderson.

Queensland Radium Institute: Professor D. Gordon.

Red Cross Blood Transfusion Service Committee: Sir Kenneth Fraser.

Royal Flying Doctor Service of Australia: Dr. G. R. Anderson.

Surf Life Saving Association of Australia (Queensland Branch): Dr. Roger A. Bennett.

University of Queensland, Faculty of Medicine: Dr. K. S. Mowatt.

University of Queensland, Pharmacy Course Committee: Dr. A. Gordon Grant.

University of Queensland, Standing Committee for the Diploma of Psychological Medicine: Dr. Gregory B. V. Murphy.

Filled Milk Act (1958) Advisory Committee: Professor D. Gordon.

The Editor of THE MEDICAL JOURNAL OF AUSTRALIA was represented by Dr. Felix Arden.

Council acknowledges with thanks the reports received from Branch representatives on these bodies.

Ethics Committee.

At the last annual general meeting of the Branch, the following were reelected members of the Ethics Committee: Dr. B. L. W. Clarke, Dr. F. W. R. Lukin, Sir Alexander Murphy, Dr. L. J. J. Nye, Dr. J. J. Power, Dr. N. L. Sherwood, Dr. W. H. Steel.

Two meetings of the Committee were held during the year. At the first meeting, the resignation of Dr. J. J. Power was accepted with regret. Dr. F. W. R. Lukin was elected Chairman of the Committee, Dr. N. L. Sherwood was reappointed as Honorary Secretary, and Dr. B. N. Adsett was elected to fill the vacancy on the Committee created by Dr. Power's resignation.

Organization Committee.

Personnel: Dr. Charles Roe (chairman), Dr. R. F. O'Shea (honorary secretary), Dr. J. R. Adam and Dr. S. A. McDonnell, together with any other councillors able to attend.

The Committee continued to meet during the year on the Tuesday preceding ordinary meetings of Council in order to deal with correspondence and matters to be referred to Council, and to make recommendations where policy was not involved.

Medical Fees Tribunal.

Personnel: Dr. Robert Miller (chairman), Dr. B. N. Adsett, Dr. C. E. Elliott, Dr. A. E. Lee, Dr. J. G. Wagner.

Dr. Robert Miller was unanimously elected chairman of the Tribunal at a meeting held in October of last year, and Dr. C. E. Elliott was elected a member of the Tribunal on Dr. N. L. Sherwood's resignation.

Six cases were submitted for adjudication during the year and were then referred to Council for the necessary action.

Building and Maintenance Committee.

Personnel: Dr. A. D. A. Mayes (chairman), Dr. B. L. W. Clarke, Dr. I. G. McPhee, Dr. L. J. J. Nye, Dr. Donald Watson.

No major problems have arisen during the year, concerning the building and grounds, and one meeting of the Committee only has been necessary. Continued supervision has, however, been maintained by the chairman, Dr. Mayes, during his regular visits as honorary curator of the grounds.

Terracing of the bank on the west side of the car park has been completed, and the car park has now been properly marked out.

It was necessary in January for the City Council to renew the water main to the premises, and a new one-inch pipe from the main to the building has now been installed. This has improved the water pressure at some points, but it is still poor in the main offices, and, when finance permits, new plumbing will be necessary and some redecorating.

The high standard at which the building and grounds have been maintained is a tribute to the energy and enthusiasm of Mr. and Mrs. H. C. Dart, our part-time gardener and cleaner.

Library.

Members' use of the library facilities continues to increase, and in the last twelve months 1054 journals and books were borrowed by members and other medical and scientific libraries, an increase of 41 on the previous year. The photostat equipment has also rendered valuable service, and some 1271 copies of articles have been supplied, as against 606 last year.

The policy of consulting with all the various sections of the profession on new books to be purchased has continued, and a further 101 volumes have been added. In addition 42 books on medical research have been purchased from the A. R. Cormack Bequest. Eighteen books, pamphlets, etc., have been added to the medical practice section, which should prove of interest to any member who wants to know more of medical practice and medico-political aspects in Australia and other countries.

The section of the library commemorating members killed in the two World Wars is steadily growing and now consists of 67 volumes, nine having been added this year. This section comprises volumes of interest to Service medical officers.

Council has approved a recommendation made by the Library Committee that an historical section be formed, devoted to original works emanating from Queensland. Donations from members of suitable books and originals or reprints of articles would be welcomed.

Through the good offices of Dr. Bryan Gandevia, the Victorian Branch Library has kindly agreed to house a large number of our older books which are of general historical interest only, and this will materially help to relieve the pressure on the limited space in our shelves.

Donations.

We thank the Editor of THE MEDICAL JOURNAL OF AUSTRALIA for the donation of 76 new books. In addition, the following donations are gratefully acknowledged: The Queensland Faculty of the Australian College of General Practitioners—continuation of subscription to *The Lancet* and *The Practitioner*; General Surgical Section, B.M.A.—subscription to *Annals of the Royal College of Surgeons of England* and *Journal of the Royal College of Surgeons of Edinburgh*; Ophthalmological Society of Australia, Queensland Section—continuation of subscription to A.M.A. *Archives of Ophthalmology* and five new textbooks; General Practitioner Group, B.M.A.—continuation of subscription to *General Practitioner*; Queensland Section of Australian Society of Anesthetists—subscription to *Survey of Anaesthesiology*; British Association of Dermatology, Queensland Branch—subscription to *Transactions of the St. Johns Hospital Dermatological Society*; Dr. Brian Wilson—continuation of subscription to *American Journal of Ophthalmology*; Dr. B. B. Barrack, Dr. N. J. Davis, Dr. W. Lockhart Gibson, Dr. C. N. Matheson, Dr. N. A. Sampson, Dr. W. J. Saxton, Mrs. M. Spooner, and the Deputy Commissioner, Repatriation Department; Royal Australian Army Medical Corps, Northern Command—"General Surgery"—U.S. Army Surgery in World War 2 Series.

The continued cooperation and assistance received from other Branches and medical and scientific libraries throughout Australia, from the library of the British Medical Association in London and from the National Library of Medicine, Washington, D.C., have also been much appreciated.

The duties of honorary librarian have been carried out by Dr. Neville C. Davis, assisted by a committee consisting of Dr. E. W. Abrahams, Dr. H. Stuart Patterson and Dr. R. F. O'Shea.

Jackson Memorial Lecture.

This lecture is delivered annually in memory of the late Ernest Sandford Jackson and is usually on a subject of historical interest.

The thirtieth Jackson Memorial Lecture was delivered by Dr. A. S. Roe at the annual general meeting held at the Brisbane Grammar School, the title being "Reminiscences of Medical Brisbane—Early Twentieth Century".

E. S. Meyers Memorial Lecture.

The lecture was established in 1957 in memory of the late Errol Solomon Meyers, and is given each year in conjunction with the University of Queensland Medical Society.

The fourth E. S. Meyers Memorial Lecture was delivered by Dr. G. A. C. Douglas on September 16, 1960, at the Lecture Theatre, Medical School, Herston. The title of the lecture was "Colles' Fracture".

Medical Students' Loan Fund.

Personnel of committee: Sir Alexander Murphy (chairman), Professor Douglas Gordon, Professor N. G. Sutton, Professor J. H. Tyrer and a representative appointed by the University of Queensland Medical Society.

This fund was established to help needy students in the later years of their course. During the year, four students were granted financial help to aid in the completion of their studies.

Memorial Prizes, 1960.

The following prizes for 1960 have been awarded upon the recommendation of the Faculty of Medicine of the University of Queensland, and it is hoped that they will be presented at the annual meeting to be held in September, 1961.

Memorial Prize of the Queensland Branch of the British Medical Association: Alan Kenneth Laws, M.B., B.S., University of Queensland, 1960.

Harold Plant Memorial Prize: Marshall Thomas Osborne, M.B., B.S., University of Queensland, 1960.

State Health Matters.

The past year again brought its quota of problems, some of which have caused Council much concern.

The Queensland Hospital Service, on which Council publicly expressed its alarm, subsequently received considerable attention in the Press, and the Minister for Health and Home Affairs is to be commended on his prompt action in establishing a Hospitals Liaison Committee. It is confidently hoped that this widely representative Committee will prove an effective means of conveying to the Minister and his Department constructive views and suggestions for improving the services available in our State hospitals.

Following a report that the Government was considering proposals for the abolition of hospital boards, Council promptly conveyed to Dr. Noble its total opposition to such a measure, which it considered would be contrary to the public interest and to the welfare of the hospitals.

In spite of the reasons given, the sudden closure of Ward C5 at Princess Alexandra Hospital provoked considerable opposition from both the public and members. Although Council's representations were not successful, the referendum of all members in the metropolitan area south of the river, conducted by means of the new Branch organization scheme, was highly satisfactory, and some 75% of the members approached expressed their opposition to the closure.

A suggestion received from the Director-General of Health that the number of maternal deaths in Queensland merited consideration and investigation was supported by Council, and at a recent exploratory meeting it was agreed that an expert committee be formed, which would operate on similar lines to the committee already established in New South Wales.

Following further discussions with the Department of Health, Council has approved a new and simplified form which will shortly be introduced for the notification of notifiable diseases.

During the year Salk vaccine was made available to private practitioners, and similarly, early in 1961, the new quadruple antigen. The stringent regulations governing the release of these vaccines have evoked considerable criticism, but Council has been equally concerned on the clinical aspects regarding the storage and relative merits of these preparations and similar immunizing agents.

The use of quadruple antigen at six months, thereby leaving infants vulnerable to pertussis and diphtheria, has been questioned, and it has been demonstrated that the standard domestic refrigerator is incapable of storing these preparations at the required temperatures. Investigations into these matters are being made, and the views of experts are being sought so that some authoritative guidance can be given.

The good relations existing with the Minister for Health and Home Affairs, Dr. H. W. Noble, and officers of his Department have been fully maintained, to the great advantage both of the public and the profession.

Federal Council.

Four meetings were held during the year, at which the Branch was represented by Dr. Robert Miller and Dr. Charles Roe.

Undoubtedly the matter which has caused most concern and discussion has been the formation of the Australian Medical Association. Regrettably, in spite of Queensland's consistent opposition to the proposed Federal Assembly as the governing body of the new Association—in which we were strongly supported by Western Australia—the majority of States approved, and the legal advisers have been instructed to take the necessary steps to enable the Australian Medical Association to commence on January 1, 1962. In accordance with the long-standing agreement between the Branches, Council has been compelled to bow to the majority decision, but it firmly intends to continue to work for its objectives within the new organization.

National Health Service matters have continued to occupy much of the Council's time. The Special Committee appointed to review the Pharmaceutical Benefits position stated that it was unable to support the alternative schemes suggested, and recommended that continued modification of the existing scheme until all objectionable features were removed was the most practicable course to pursue. Federal Council accepted this view, and has made representations for further liberalization in prescribing and for increases in the doctors' bag supplies.

Negotiations for increased payments for local medical officers under both the Pensioner Medical Service and Repatriation Medical Services have not yet been successful, and an approach to the Prime Minister is to be made.

Strong representations were made to the Minister for Repatriation regarding the Department's unilateral action in extending its medical services to Service pensioners. Notice was also given that, in accepting the position until June 30, 1961, this in no way committed the Association in regard to any agreement reached after that date.

So that the Association may be better prepared to resist such actions by government and semi-government organizations, all States have been urged to organize their membership under similar schemes to those now prepared in Queensland and Victoria.

Following an approach by the Director-General of Medical Services, Army, for Federal Council's approval to proposals which would permit Service medical officers to undertake the treatment of dependants of Service personnel, Branch Council has voiced its opposition, on the grounds that it would not be a complete service and would be a further encroachment on private practice.

Discussions held with the Director of Social Services regarding the expansion of rehabilitation services proved so fruitless that Federal Council's representatives considered a strong approach to the Prime Minister was the only alternative. Queensland has supported the recommendation, and has urged that rehabilitation, being a medical problem, should be placed under medical and not lay administration.

Commonwealth Health Insurance Council.

A meeting of this Council was held in Canberra on November 15 and 16, 1960, and the following report of its proceedings is supplied by Dr. Alan E. Lee, who was appointed to the Council by the Minister on the nomination of the Federal Council of the British Medical Association.

All aspects of voluntary health insurance received detailed consideration. The special accounts, on the hospital side at least, were recognized as performing a valuable function. By withdrawing from the ordinary fund 8% of members with an experience over three times worse than the general average, a substantial improvement in fund finances has been achieved. On the medical side, where less than 1% of membership is involved, it is believed that the account serves little purpose, and the Department was asked to terminate it. Possible alternatives are still under discussion.

The Council strongly advised the Minister to set up medical and hospital benefits committees of inquiry, which have been provided for in the *National Health Act*. Difficulties in determining disciplinary methods have delayed such action.

A register of specialists for States other than Queensland is still under discussion. This difficult problem is likely of solution only on the individual State levels.

Many other matters mainly of interest to the fund management were mentioned. The Council was very glad of this first opportunity to meet the new Director-General of Health,

Dr. Refshauge, and found him an impressive chairman. This Council has now established itself as the chief advisory agency to the Government on all matters affecting the health insurance under the *National Health Act*.

Australasian Medical Publishing Company Limited.

Two meetings of the directorate were held during the year, one being attended by the Queensland director, Dr. Alan E. Lee, and the other during his absence overseas, by a Queensland member of the company, Dr. Harold W. Horn.

This extraordinarily successful company, wholly owned by the Branches of the British Medical Association in Australia, not only publishes *THE MEDICAL JOURNAL OF AUSTRALIA*, but is also the chief scientific printer in Australia.

While its total capital involves only some £60,000 worth of debentures issued to individual members or to the Branches, the actual value of its assets and its earning capacity would justify a capital structure of several times this value. Methods by which greater financial returns could accrue to its owners are now under consideration, and the Branches can look forward with confidence to receiving a greater share of its profits in future years.

The formation of the Australian Medical Association poses certain problems for this company. In particular, the Journal will become the official organ of the new Association, and the directors are concerned with the extent to which the relationship will curb the present freedom of the Editor to discuss medico-political matters. Discussions have been held with the Steering Committee of the new Association, and satisfactory relationships seem assured.

Since receipt of the *British Medical Journal* will be a voluntary matter for members in the new Association, some discussion has occurred with the Editor of that Journal as to whether the publishing company can provide to members some of the important information they now obtain from the Journal. The question of publication of a lay health magazine has been under attention for several years, without any firm decision as to whether the value of such a publication justifies the financial risk involved in its production.

ALAN E. LEE.

Sections for the Study of Special Branches of Medical Knowledge.

General Surgical Section (B.M.A.).

It is with pleasure that we report a rather successful year in 1960-1961. Professor Loewenthal visited us in 1960, and members very much enjoyed the week-end he spent in Brisbane discussing clinical cases and the informal lecture by our guest. Our thanks are due to the Mater and South Brisbane Hospitals for providing facilities.

Other meetings have been fairly well attended. It is perhaps still not realized that this group is a section of the B.M.A. in Queensland, and is not a "splinter group" setting itself up in opposition to the surgical Colleges. Its aim is primarily to represent the specialist general surgeons practising in Queensland when requested to do so by the Council and at the same time to give general surgeons a chance to raise their united voices to Council.

This year we are fortunate in that Mr. Ken Starr has agreed to come up for the week-end, September 30-October 1, to address the group and to discuss clinical problems.

At two meetings in the last year we have shown clinical films in addition to attending to the business side of the group's affairs. Mr. Ian Burt was elected chairman, and the offices of secretary and treasurer have been combined.

HENRY L. J. LUSBY,
Honorary Secretary.

Ophthalmological Society of Australia, B.M.A. (Queensland Branch).

All general meetings have been well attended, and keen interest was shown by the members. In addition there have been several clinical meetings with demonstrations of interesting eye cases, as well as one lecture by Dr. K. Lidgett of Melbourne, and one lecture by Dr. K. Brown on plastic surgery about the eye.

The library has been greatly built up, and is now one of the largest sections, containing 48 volumes and five periodicals.

A revision of the Medical Benefit refunds for eye operations was made by a subcommittee, and suggested amendments were forwarded to the Council of the British Medical Association.

Office bearers are as follows: Dr. O. Salkeld, President; Dr. M. E. Cameron, Honorary Secretary; Dr. M. Harrison, Honorary Treasurer.

M. E. CAMERON,
Honorary Secretary.

Orthopaedic Section (B.M.A.).

The members of the Orthopaedic Section met several times during the year. The annual general meeting of the Australian Orthopaedic Association was held at Surfers Paradise in May, 1961, and seemed to be a successful meeting.

M. JOHN GALLAGHER,
Honorary Secretary.

Pædiatric Section.

Founded in 1949. Chairman: Dr. P. A. Earnshaw. Membership 29.

Professor Lorimer Dods, M.V.O., of Sydney, delivered the inaugural Jefferis Turner-Lockhart Gibson Lecture on November 18, 1960, in the Mater Misericordiae Hospital Auditorium, Brisbane. Prior to the lecture, members of the Section entertained Professor Dods to dinner at the United Service Club.

Professor Wilfrid Gaisford of Manchester, Professor Douglas Hubble of Birmingham, Dr. Charlotte Anderson of Melbourne and Professor C. De Silva of Colombo have given addresses during the year; and Dr. Mary Crosse of Birmingham has been invited to give the second Jefferis Turner-Lockhart Gibson Lecture later this year.

Professor John Rendle-Short, first occupant of the Chair of Child Health at the University of Queensland, was welcomed at a dinner given in his and Professor Hubble's honour on May 24, 1961.

An amendment has been made to the qualifications for membership, which now reads: "Membership of the Queensland Pædiatric Section (B.M.A.) shall be open to all members of the British Medical Association who are engaged in the treatment and/or welfare of infants and children and who are duly elected by a 2:1 majority of members at a duly convened meeting of the Queensland Pædiatric Section (B.M.A.)."

H. STUART PATTERSON,
Honorary Secretary.

Plastic and Maxillo-Facial Section.

This Section held its first annual meeting in January, 1961, at which Dr. L. S. Davies was elected chairman.

One important matter considered during the year was Commonwealth medical benefits. A recommendation was also conveyed to the Branch Council regarding the purchase of books for the library.

K. J. BROWN,
Honorary Secretary.

Radiological Section.

Three clinical meetings have been held. Four candidates have passed the examination for membership of the College of Radiologists of Australasia—Dr. B. Fitzgerald, Dr. R. J. Thorpe, Dr. J. Masel in radiodiagnosis, and Dr. R. Withers in radiotherapy. The present chairman is Dr. Keith Mowatt.

During the last year there were visits from Professor D. W. Smithers and Dr. M. Lederman of Royal Marsden Hospital, London.

F. SCHUBERT,
Honorary Secretary.

Special Group of Physicians, Neuropsychicians, Dermatologists and Allergists.

This group has met on the following dates in 1960 and 1961: February 22, July 19, October 25, 1960; January 24, February 27, 1961.

These meetings have been mainly concerned with discussion of the agenda of Branch Convocation and election of delegates to the Branch Convocation. The group has made recommendations in relation to fees for specialist consultation and for court appearances, and has submitted these recommendations to Council. Delegates to the fifth Branch Convocation held on April 23, 1960, were Dr. P. J. Landy and Dr. D. H. Meyers. The items submitted for the agenda of this Convocation were: (i) overcrowding at out-patient departments; (ii) teaching of dermatology.

At the meeting held on July 19, 1960, Dr. Landy and Dr. Meyers were again elected as delegates for the sixth Branch Convocation, and the item relating to the report

of the dermatologists on the teaching of dermatology which had been deferred from the previous convocation was once again placed on the agenda.

At the meeting held on October 25, 1960, recommendations were made to Council in relation to the Branch library.

At the meeting held on January 24, 1961, recommendations were made to Council: (i) in relation to anomalies and additions to the Commonwealth Schedule of Medical Benefits; (ii) in relation to the interpretation of electrocardiographs; (iii) in relation to a query received by Branch Council from the parent of a sufferer of asthma in New Zealand, requesting details of climatic conditions in Queensland and their relationship to asthma.

At a meeting held on February 27, 1961, recommendations in relation to purchase of books for the Branch library were made. Dr. Landy and Dr. Meyers were again elected as delegates to the seventh Branch Convocation held on April 15, 1961.

JOHN A. NYE,
Convener.

Visiting Specialist Special Group (B.M.A.).

The present office bearers of our group are: Chairman, Dr. K. Hirschfeld; Deputy Chairman, Dr. Evan Thomson; Secretary-Treasurer, Dr. T. Ferrier.

In the last year the group has been mainly concerned with revising the terms and conditions of appointment for its members. The revised version has been forwarded to B.M.A. Council for presentation to the Minister of Health and Home Affairs.

The constitution of our group has been drawn up and presented to Branch Council, which has suggested certain alterations. These are yet to be ratified by a further meeting of our group.

T. M. FERRIER,
Honorary Secretary.

Salaried Medical Officers' Group (B.M.A.).

The following information is extracted from the group's fifth annual report, presented at the annual general meeting, 1961.

Salaries.

The Professional Officers Association acted in our interests, and the margins increases have been added to our salaries as from July 4, 1960. The Minister has advised the British Medical Association of the relation of salaries of doctors in hospital service to those in the Public Service.

Superannuation.

There has been no extension of this. Supervisors are still excluded. The Minister considers they are not permanent staff.

Leave.

(a) *Study Leave.*—At present this privilege is limited to certain positions, and in the absence of certain circumstances there will be no financial assistance to anyone on study leave. The Minister considers that an officer on such leave may possibly have additional income (in the form of fees, from locum work, etc.).

(b) *Leave to Examine.*—The Minister has granted three days' leave on full pay to any officer who acts on request from his College as an examiner.

(c) *Inter-Sabbatical Leave.*—Is not "on".

(d) *Sick Leave.*—Special sick leave may be sought for those who can show it is due to exposure to infection in the course of duty. The extent of this is not mentioned.

Terms of Appointment.

It is our desire to see definite contracts of employment. The Minister considers the present, rather loose, arrangement satisfactory. Tenure of appointment is nominally for seven years. We asked concerning the right of appeal to an independent body. This was smothered, and the Minister stated he would be pleased to hear from any would-be appellant.

Insurance.

Insurance against travel and other hazards of service: a parity with the Public Service exists.

Medico-Legal Responsibility.

The matter of responsibility between hospital and officer has not been clarified. The attitude of the committee is to advise members of the group to join the Medical Defence Society.

First-Year Resident Medical Officers.

The new residents have been circularized re joining Medical Defence, Professional Officers Association, British Medical Association and the Salaried Medical Officers' Group.

Australian Council of Medical Officers Organizations.

This matter has been raised, and with the new Australian Medical Association, a body such as this would have direct representation at the Federal level. Opinion on this matter has been deferred to this annual general meeting.

We are indebted to the B.M.A. Branch Council and certain of its members for their activities in our interests and for negotiation with the Minister.

The committee for this year are: Dr. K. S. Mowatt (chairman); Dr. B. Kynaston (honorary secretary); Dr. S. J. C. Roberts (honorary treasurer); other members, Dr. O. Harris and Dr. J. Musgrave.

B. KYNASTON,
Honorary Secretary.

Affiliated Local Associations.

Brisbane Valley Local Medical Association.

The same office bearers were retained this year as for the previous year: Dr. R. L. Rankin, President; Dr. D. B. Wherrett, Treasurer; Dr. D. J. Chapman, Secretary. Monthly meetings have been held alternately in Kilcoy and in Toogoolawah, and at most meetings recordings of medical lectures were played.

We welcomed lecturers from Brisbane on two occasions—Dr. John Byrne, who spoke on "Ante-Partum Hemorrhage", and Dr. Ian Ferguson, whose subject was the "Treatment of Arthritis". Both were informative and of great value.

We would like to place on record our appreciation of the assistance given by the Post-Graduate Committee.

D. J. CHAPMAN,
Honorary Secretary.

Bundaberg Local Medical Association.

The President is Dr. L. McKeon, and we have a membership of fourteen.

Meetings have been held quarterly or as business arises. Again we find good attendances at lectures arranged by the Post-Graduate Medical Education Committee.

L. S. STARK,
Honorary Secretary.

Cairns Local Medical Association.

The office bearers are Dr. J. H. Barnes (President) and Dr. S. D. Watford (Secretary), with a membership of 29.

This association has conducted the following activities during 1960-1961: five business and general meetings and four clinical meetings. These have been held again after a lapse of a couple of years and have been well attended.

A dinner was held in September, 1960, for all doctors in this area, and was well attended by members and their wives from a wide area. Such a function is now to be held annually.

Two visits from post-graduate lecturers were conducted.

Four well-attended lectures were given and greatly appreciated by all. This association wishes to record thanks to the Post-Graduate Committee for its continued interest and help.

Members of the association have continued to serve as members of welfare bodies and boards in this area.

S. D. WATFORD,
Honorary Secretary.

Gladstone and District Local Medical Association.

Four business and three clinical meetings were held during the year. Film evenings, arranged respectively by courtesy of E. R. Squibb and Winthrop Laboratories, were very instructive and much appreciated.

One of the members, Dr. Reginald Maltby, resigned during the year, and a new member, Dr. Cecil Sinnamon, was enrolled.

The Local Association was represented at the annual meeting and sixth Branch Convocation by the Honorary Secretary.

The President is Dr. Walter Yum.

JOHN A. MCGREE,
Honorary Secretary.

Gympie Local Medical Association.

The office-bearers of the association are: President, Dr. L. M. Outridge; Honorary Secretary, Dr. J. C. Wassell; Honorary Treasurer, Dr. N. B. Wilmer.

Meetings have been held as the need arose, and at one meeting it was decided to rotate office bearers each year in an attempt to maintain enthusiasm.

We regret the reduction of visiting lecturers' trips to Gympie and Maryborough, as we find these lectures helpful and stimulating.

Delegates from our association attended the sixth and seventh Branch Convocations.

J. C. WASSELL,
Honorary Secretary.

Innisfail Local Medical Association.

The President is Dr. W. N. Markwell, and Honorary Secretary, Dr. John G. Bulman.

Our membership now numbers 12 practitioners, scattered over a rather large area, and for this reason it is difficult to obtain a large attendance at our meetings.

Lectures by visiting specialists arranged by the Post-Graduate Education Committee have been greatly appreciated by those of us able to attend, and in addition to the formal lecture sessions, these visits provide occasion for congenial social contact between our members and the visitors.

Several of our members attended at the annual dinner of the Cairns Local Association, and it is hoped that some of us will join in the clinical meetings organized by that Branch from time to time.

JOHN G. BULMAN,
Honorary Secretary.

Ipswich and West Moreton Local Medical Association.

A full programme of lectures, clinical meetings, a film evening and social functions was undertaken in the past year. We wish to express our gratitude to our many lecturers and to the Post-Graduate Medical Education Committee for the efficient service they provide.

The J. A. Cameron Memorial Lecture was delivered by Dr. T. O'Leary, of the Royal Flying Doctor Service, on "Getting the Patient to Hospital".

Two special meetings to discuss business and medico-political matters were also held.

At the annual general meeting, Dr. K. F. Brennan was elected President to succeed Dr. G. B. Roberts.

M. J. MCENERY,
Honorary Secretary.

Mackay Local Medical Association.

The Mackay Local Medical Association, with a membership of 24, had a fairly routine year. Dr. P. W. Hopkins was reelected as President, and Dr. E. H. Brown, Secretary. We have continued to meet quarterly for business meetings and presentation of papers, with spasmodic meetings of the Medical Science Groups.

Papers presented were: "Peyronie's Disease", by Dr. D. Robertson; "Immunological Aspects of Thyroid Disease", by Dr. I. L. Chapple; "Phenacetin in Renal Disease" and "Haemorrhagic Disease of the Newborn", by Dr. P. Hopkins; "Recent Changes in Military Medical Doctrine", by Dr. I. Chenoweth.

Post-graduate lectures by Dr. Peter Grant on "Neo-Natal Deformities" and by Dr. K. Wilson on "Induction of Labour" and "Forceps Delivery" were well attended.

A special meeting was held on September 27, 1960, at which it was decided to increase the scale of fees locally. Chief increases were in consultation fees to £1 1s., house calls to £1 11s. 6d. and confinement fees to £15 15s.

The Local Association was represented at the sixth and seventh Branch Convocations.

We were very pleased on May 27, when Mr. Hedley Atkins, Sims Travelling Professor, who was on his way to Hayman Island for a holiday, consented to lecture to us. His topic

was "Breast Diseases in General Practice". He thoroughly enjoyed meeting a group of country general practitioners, and we enjoyed hearing an overseas lecturer first hand.

E. H. BROWN,
Honorary Secretary.

Nambour District Local Medical Association.

During the year, Dr. D. Wilson, Dr. I. Palmer and Dr. M. K. Palmer, all of Caloundra, were elected as new members, and Dr. Brian Rowsell has left to commence practice in Murgon.

The post-graduate lectures continue to provide a valuable service, with the post-graduate week-end and dinner the highlight of the year. However, the response of the local members continues to be disappointing, the attendance averaging less than six. It is hoped that in the future members will make the effort to attend and hear these lecturers, who give up their valuable time in providing this service.

A. B. SHEARER,
Honorary Secretary.

Rockhampton Local Medical Association.

Our association held the North Queensland Medical Conference on July 24 to July 29, 1960.

A most successful academic and social programme was enjoyed by over 90 visiting members of conference and their wives. Sir Albert Coates delivered a brilliant inaugural address. The plenary session discussed road traffic accidents, and a total of 33 papers were delivered.

Three ordinary general meetings were held to discuss medical and medico-political subjects.

The academic interests were maintained by two series of post-graduate lectures in addition to our regular monthly clinical meetings. A buffet dinner dance for members and wives was held in association with one of the visits of our post-graduate lecturers.

The office bearers for the year are: Dr. R. H. Orr, President; Dr. K. M. Higlett, Vice-President; Dr. J. F. Gillogley, Secretary-Treasurer.

J. F. GILLOGLEY,
Honorary Secretary.

South Coast Local Medical Association.

We have 25 members, including two honorary life members.

The average attendance at the business meetings was nine members. Office bearers for the year were: President, Dr. E. Margulies; Secretary, Dr. F. L. Johnson; Treasurer, Dr. F. Bowly.

We regret to have to report the loss of one of our best-known members, Dr. George Mason, who died on June 28.

During the year we have had four business meetings and four lecture meetings. The annual general meeting will be held in August.

We had, as usual, four very interesting lectures from Brisbane specialists. The lectures were not formalized, and the subjects were presented as the general practitioner needs to know them. This was much appreciated, and we would again thank our lecturers, Dr. Murray Elliott, Dr. W. G. Livingstone, Dr. G. Anderson and Dr. V. E. Sampson.

Further lectures have been arranged, and we feel that the efforts of the Post-Graduate Committee in this field are very worth while.

The establishment of the new general hospital provided its share of interest in the politico-medical field, and gave rise to several negotiations with authorities. These have been amicably settled.

On the social side, the annual dinner with the local dental association was, as usual, very successful.

F. L. JOHNSON,
Honorary Secretary.

Southern Downs Local Medical Association.

The Southern Downs Local Association of the British Medical Association was formed at a meeting in Warwick on November 12, 1960, at which Dr. P. A. Earnshaw, Queensland President, was present.

This Local Association comprises an area taking in Clifton, Allora, Killarney, Warwick, Stanthorpe, Inglewood, Texas and Goondiwindi, and has a membership of 18.

Dr. J. Deane-Butcher was elected first President, Dr. Glen Buchanan is Stanthorpe Committee member, and Dr. J. McG. Doneley is Secretary-Treasurer.

We have held several meetings during the year and have had the pleasure of one post-graduate lecture given by Dr. Robin Charlton.

J. MCG. DONELEY,
Honorary Secretary.

Toowoomba Local Medical Association.

Another successful year has just been completed. Our membership continues to grow, and has just reached the half-century mark. Office bearers for the past year have been: Dr. J. W. P. Henderson (President), Dr. R. G. Harbison (Secretary), Dr. I. McCracken (Treasurer), Dr. J. Power (President-Elect).

During the year five committee meetings were held to discuss current business, and two special general meetings were held on matters of more weighty importance.

The annual Post-Graduate Week-End was held during the long week-end in June, and was most successful. For the first time it was extended to three days, and local talent encouraged to take part. We were most fortunate to have such distinguished visitors as Sir Alexander Murphy, Dr. Konrad Hirschfeld and Dr. Rathus. The standard of the lectures was very high, and the attendances correspondingly enthusiastic. The social evening of the week-end will be remembered by probably one of the best smorgasboard dinners ever produced in Toowoomba.

Other post-graduate lectures held during the year were also much enjoyed by all, and attendances were very satisfactory.

The annual cricket match against the chemists resulted, this year, in an overwhelming victory for the latter, who revenged their shattering defeats of the previous two years.

R. G. HARBISON,
Honorary Secretary.

Townsville Local Medical Association.

The association held 19 meetings during the year, of which eight were business and nine were clinical meetings. There were two post-graduate week-ends in September, 1960, and May, 1961. In addition, Dr. G. Bradfield gave a lecture on "Perinatal Mortality".

President for the year was Dr. John Ward, with Dr. R. Douglas Vice-President. Post-graduate lecturers were Dr. J. Fitzwater and Dr. K. Jamieson in September and Dr. R. Row and Dr. A. Quayle in May, 1961. These week-ends were very well attended, even though one coincided with a long holiday week-end.

The sixth and seventh Convocations were attended by Dr. J. Ward and Dr. D. Johnston, and Dr. P. Monahan and Dr. D. Johnston. The Convocation is considered very useful by the association, and the agenda is discussed in considerable detail both before and after the Convocation.

The annual dinner dance in October was very gratifying to our Social Committee. The annual dinner on July 8 was presided over by Dr. Paul Hopkins, deputizing for the President, Dr. P. A. Earnshaw.

The average attendance at meetings has been maintained, but the attendance of resident medical officers at post-graduate week-ends was disappointing. Total membership consists of 46 city and four country members.

The large number of business meetings reflects the local interest in medico-political matters, particularly the Pharmaceutical Benefits Scheme and the formation of the Australian Medical Association.

In addition, this year has seen the commencement of planning for the 1962 North Queensland Medical Congress. The organizing committee includes Dr. R. Douglas as President and Dr. J. Ward and Dr. G. Douglas as Secretaries. The conference is to be held from June 18 to 23, 1962, and, in conclusion, may I say we look forward to seeing many of our fellow practitioners as visitors to the conference in 1962.

E. D. JOHNSTON,
Honorary Secretary.

Upper Burnett Local Medical Association.

This Medical Association was formed in 1960, and the number of members is seven. Membership is comprised of members of the British Medical Association in the area extending from Biggenden to Monto.

During the year four meetings were held. At two of these, visiting lecturers from Brisbane, Dr. B. Knapp and Dr. R. Coates, spoke on subjects of interest to members, and these were much appreciated. Another meeting to discuss matters of local interest was held in March. These meetings

are held in various centres of the district and are rotated to the various towns as prearranged.

During the period under review, it was resolved that no increase in fees be made, in view of the local drought conditions and general financial stringencies.

J. F. MINOGUE,
Honorary Secretary.

Western Downs Local Medical Association.

The office bearers reelected at the annual meeting were Dr. A. M. Martell (President) and Dr. E. H. Cramond (Secretary-Treasurer).

Six meetings were held during the year in conjunction with post-graduate lectures.

E. H. CRAMOND,
Honorary Secretary.

The Queensland Medical Land Investment Company Limited.

Directors: Dr. J. G. Wagner (chairman), Sir Kenneth Fraser, Dr. B. N. Adsett, Dr. T. V. Stubbs Brown, Dr. H. W. Horn, Dr. A. E. Lee, Dr. F. W. Lukin.

This company, originally formed in 1912, is still in being. Its funds have been loaned to the Association on a minimal interest charge sufficient to defray the small running costs involved.

British Medical Agency of Queensland Pty. Ltd.

Directors: Dr. Norman Sherwood (chairman), Dr. B. N. Adsett, Dr. N. C. Davis, Dr. W. D. Friend, Dr. H. W. Horn, Dr. G. A. McLean, Dr. A. F. McSweeney, Dr. Robert Miller, Dr. L. J. J. Nye, Dr. L. A. Little, Dr. J. G. Wagner.

In presenting this report, I would like to remind readers that the company's financial year ends on September 30, whereas the Association's financial year ends on June 30; thus there is a three months' overlap period.

The Agency continues to fulfil its many functions for the benefit of members, including the latest addition—provision and supply of National Health Service prescription forms, as previously supplied by the Government, at economical cost.

Services provided in the sale of printing, stationery, instruments and household appliances, etc., are appreciated by members, particularly those starting out in practice.

The Agency continues to serve both the self-employed and employed professional person by virtue of being administrators of the Medical and Associate Professions Superannuation Plan and the Employed and Associate Professions Assurance Fund, respectively.

Sales of practices during the year show practically no variance in numbers as compared with previous periods. There are more inquiries for country practices than has been evident for some years.

The financial results for the first half-year were not up to average, but, as has been the case on one or two occasions over the past quarter of a century, the second half of such year, that is, to September 30, 1960, disclosed a substantial recovery, and the financial results ended satisfactorily.

NORMAN SHERWOOD,
Chairman of Directors.

Queensland Medical Finance Pty. Ltd.

Directors: Dr. Norman Sherwood (chairman), Dr. R. S. Cohen, Dr. H. W. Horn, Dr. G. A. McLean, Dr. A. F. McSweeney, Dr. L. J. J. Nye, Dr. D. P. Sapsford, Dr. J. G. Wagner.

At the time that this report reaches you, only six doctors are in receipt of financial assistance, and the majority of these will liquidate their indebtedness during the next few months.

Due to present financial restrictions and the manner in which the company arranges loans with bank assistance, further finance cannot be anticipated at present.

Members will be advised through the "Newsbulletin" when applications from members seeking financial assistance will be welcomed.

NORMAN SHERWOOD,
Chairman of Directors.

Medical and Associate Professions Superannuation Plan.

Founders: Dr. Norman Sherwood (chairman), Dr. Brian Hirschfeld, Dr. Alan E. Lee, Dr. L. J. J. Nye.

Trustees: Dr. J. G. Wagner (chairman), Dr. J. R. Adam, Dr. B. N. Adsett, Dr. A. D. Isles, Dr. N. V. Youngman.

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION (INCORPORATED).

Balance Sheet as at June 30, 1961.

| | £ | s. | d. | £ | s. | d. | | £ | s. | d. | £ | s. | d. |
|---|---------|----|----|---------|----|----|--|---|----|----|---------|----|----|
| FIXED LIABILITIES: | | | | | | | | FIXED ASSETS (at cost, less depreciation): | | | | | |
| Loans from Queensland Medical Land Investment Co. Ltd.— | | | | | | | Land and Buildings—at cost | 34,190 | 9 | 10 | | | |
| Interest Free | 4,650 | 0 | 0 | | | | Typewriters, Book-cases, Balopticon and Furniture | 1,377 | 3 | 1 | | | |
| At 3% per annum | 2,901 | 15 | 0 | | | | Floor Coverings and Household Equipment | 314 | 2 | 0 | | | |
| | | | | 7,551 | 15 | 0 | Gestetner Duplicator | 81 | 0 | 0 | | | |
| CURRENT LIABILITIES: | | | | | | | | | | | | | |
| Accrued Charges | 1,224 | 3 | 0 | | | | Refrigeration Installation | 41 | 2 | 6 | | | |
| Provision for Superannuation | 342 | 18 | 3 | | | | Motor Mowers and Garden Tools | 85 | 13 | 11 | | | |
| Library Fund—Returned Medical Officers' Association | 122 | 9 | 4 | | | | Fire Alarm System | 20 | 14 | 4 | | | |
| Library Fund—Bequest not yet expended | 91 | 18 | 9 | | | | Bancroft Medals and Collar—at cost | 18 | 9 | 0 | | | |
| Subscriptions for Remittance to— | | | | | | | Library—at valuation | 743 | 4 | 6 | | | |
| British Medical Association, London | £113 | 8 | 3 | | | | | | | | 36,871 | 19 | 2 |
| Australasian Medical Publishing Co. Ltd., Sydney | £10 | 15 | 0 | | | | LOAN RE SALE OF PROPERTY: | | | | | | |
| | | | | 124 | 3 | 3 | C. Jenkins | 1,755 | 1 | 9 | | | |
| | | | | | | | | | | | 38,627 | 0 | 11 |
| | | | | 1,905 | 12 | 7 | INVESTMENTS: | | | | | | |
| ASSOCIATION FUNDS: | | | | | | | | | | | | | |
| Accumulation Fund— | | | | | | | Queensland Medical Land Investment Co. Ltd.— | | | | | | |
| Balance at July 1, 1960 | £40,671 | 13 | 11 | | | | 5,950 shares of £1 each paid to 10s. each at cost | 2,975 | 0 | 0 | | | |
| Deduct Deficit for year as per Revenue Account | £819 | 6 | 4 | | | | British Medical Agency of Queensland Pty. Ltd.— | | | | | | |
| | | | | 39,852 | 7 | 7 | 3,003 shares of £1 each fully paid at cost | 3,003 | 0 | 0 | | | |
| Building Fund—Contributions | 6,160 | 19 | 0 | | | | Australasian Medical Publishing Co. Ltd., Sydney— | | | | | | |
| | | | | 46,013 | 3 | 7 | 6½% Series "C" | | | | | | |
| | | | | | | | Debentures at cost £50 | £50 | 0 | 0 | | | |
| | | | | | | | 6½% Series "D" | | | | | | |
| | | | | | | | Debentures at cost £5 | £5 | 0 | 0 | | | |
| | | | | | | | 6½% Series "E" | | | | | | |
| | | | | | | | Debentures at cost £6,200 | £6,200 | 0 | 0 | | | |
| | | | | | | | 6½% Series "E2" | | | | | | |
| | | | | | | | Debentures at cost £200 | £200 | 0 | 0 | | | |
| | | | | | | | Advance not yet converted to Debentures | 87 | 17 | 0 | | | |
| | | | | | | | | | | | 6,542 | 17 | 0 |
| | | | | | | | Library Fund—R.M.O. Association— | | | | | | |
| | | | | | | | Southern Electric Authority of Queensland—£100 V.I. Stock, at cost | 115 | 9 | 4 | | | |
| | | | | | | | | | | | 12,636 | 6 | 4 |
| CURRENT ASSETS: | | | | | | | | | | | | | |
| English, Scottish and Australian Bank Ltd. | 4,166 | 13 | 1 | | | | | | | | | | |
| Cash on Hand | 25 | 0 | 0 | | | | | | | | | | |
| Prepayments | 15 | 13 | 10 | | | | | | | | | | |
| | | | | 4,207 | 6 | 11 | | | | | | | |
| | | | | £55,470 | 14 | 2 | | | | | £55,470 | 14 | 2 |

Note: A Mortgage covering the Freehold Lands of the Association is held by the English, Scottish and Australian Bank Ltd., to secure future advances.

(Sgd.) W. D. FRIEND,
Honorary Treasurer.

AUDITORS' REPORT.

We have compared the above Balance Sheet with the books, accounts and vouchers of the Queensland Branch of the British Medical Association (Incorporated), and have obtained all the information and explanations we have required.

In our opinion, the Balance Sheet is properly drawn up to exhibit a true and correct view of the state of the Association's affairs at June 30, 1961, according to the best of our information and explanations given to us, and as shown by the books of the Company.

The Register of Members and other records which the Company is required to keep by the Companies Acts of 1931-1960, or by its Articles, have, in our opinion, been properly kept.

Brisbane,
August 4, 1961.

GROOM, SANDERSON & Co., Chartered Accountants,
Auditors.

During the year under review, the Plan has continued to flourish in spite of the recent financial recession. As was expected, market value of share holdings diminished somewhat in keeping with the general financial situation. But already there has been very substantial recovery from the lowest point of recession, and the latest audit gives cause for optimism for the future.

An increase in membership occurred during the year, and it would appear a propitious time for new members, both young and old, to join the Plan, or to increase their contributions, providing the Plan rules so permit.

The fourth annual general meeting is set down to be held at B.M.A. House on Tuesday, September 12, 1961, at 8 p.m. Subsequent thereto copies of the annual report, together with brochures, will be made available on application to the Plan Secretary, B.M.A. House, 88 L'Estrange Terrace, Kelvin Grove, Brisbane, W.1.

J. G. WAGNER,
Chairman of Trustees.
NORMAN SHERWOOD,
Chairman of Founders.

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION (INCORPORATED).

GENERAL FUND.

Statement of Receipts and Payments for Twelve Months Ended June 30, 1961.

| RECEIPTS. | | | | PAYMENTS. | | | |
|--|--------|----|----|-----------|----|----|----|
| | £ | s. | d. | | £ | s. | d. |
| 1960: July 1. | | | | | | | |
| To Funds at Credit: | | | | | | | |
| E.S. and A. Bank Ltd | 4,536 | 15 | 10 | | | | |
| Cash on Hand | 25 | 0 | 0 | | | | |
| | | | | 4,561 | 15 | 10 | |
| 1961: June 30. | | | | | | | |
| To Subscriptions: | | | | | | | |
| Queensland Branch Subscriptions | 11,019 | 9 | 9 | | | | |
| For remittance to British Medical Association, London .. . | 3,788 | 6 | 5 | | | | |
| For remittance re THE MEDICAL JOURNAL OF AUSTRALIA .. . | 386 | 8 | 9 | | | | |
| World Medical Association .. . | 33 | 9 | 0 | | | | |
| Medical Students' Loan Fund .. | 823 | 15 | 6 | | | | |
| | | | | 16,051 | 9 | 5 | |
| .. General: | | | | | | | |
| Rents Received .. | £388 | 0 | 0 | | | | |
| British Medical Agency of Qld. Pty. Ltd.— | | | | | | | |
| Rent and Clean- | | | | | | | |
| ing .. £1,000 0 0 | | | | | | | |
| Clerical Assist- | | | | | | | |
| ance .. £204 0 0 | | | | | | | |
| | | | | £1,204 | 0 | 0 | |
| | | | | 1,592 | 0 | 0 | |
| F. Morton—Mortgage Repayments, Bartley Street Property .. . | 1,080 | 0 | 0 | | | | |
| Australasian Medical Publishing Co. Ltd.— | | | | | | | |
| Interest on Funds held .. . | £6 | 2 | 1 | | | | |
| Interest on Debentures .. . | £362 | 16 | 3 | | | | |
| | | | | 368 | 18 | 4 | |
| Building Fund Subscriptions .. | 51 | 8 | 0 | | | | |
| Interest on Mortgage Loan—F. Morton .. . | 12 | 10 | 11 | | | | |
| Directors' Fees—Yorkshire Insurance Co. Ltd. .. . | 50 | 0 | 0 | | | | |
| Interest—E.S. and A. Bank Ltd. Southern Electric Authority of Queensland—Interest on V.I. Stock (R.M.O.A. Library Fund) .. | 81 | 5 | 0 | | | | |
| | 7 | 0 | 0 | | | | |
| Sale of Lists of Members .. | 5 | 10 | 0 | | | | |
| | | | | 3,248 | 12 | 3 | |
| | | | | £23,861 | 17 | 6 | |

| | | | | | | | |
|---|-------|----|----|---------|----|----|--|
| 1961: June 30. | | | | | | | |
| By Amounts remitted on Account of Subscriptions collected to: | | | | | | | |
| British Medical Association, London .. . | 3,763 | 2 | 8 | | | | |
| Australasian Medical Publishing Co. Ltd., Sydney— | | | | | | | |
| Publication of Journals .. . | 42 | 18 | 9 | | | | |
| To be applied to purchase of Series "E2" Debentures .. . | 344 | 7 | 6 | | | | |
| World Medical Association .. . | 33 | 9 | 0 | | | | |
| Medical Students' Loan Fund .. | 824 | 6 | 0 | | | | |
| | | | | 5,008 | 3 | 11 | |
| .. Federal Council—Capitation Fees | | | | 2,049 | 12 | 6 | |
| .. Branch Expenses: | | | | | | | |
| Salaries and Honoraria .. . | 5,192 | 4 | 1 | | | | |
| Printing and Stationery .. . | 987 | 14 | 8 | | | | |
| Pension .. . | 480 | 0 | 0 | | | | |
| Postages and Duty Stamps .. . | 403 | 12 | 1 | | | | |
| Convocation Expenses including | | | | | | | |
| Travelling Expenses .. . | 520 | 16 | 1 | | | | |
| Social Functions .. . | 269 | 1 | 1 | | | | |
| Light and Gas .. . | 200 | 0 | 7 | | | | |
| Travelling Expenses .. . | 163 | 4 | 5 | | | | |
| Convention Expenses .. . | 192 | 7 | 6 | | | | |
| Legal Expenses .. . | 121 | 16 | 0 | | | | |
| Telephone .. . | 174 | 3 | 2 | | | | |
| Bank Charges, Insurance and Sundries .. . | 109 | 4 | 2 | | | | |
| Council and General Meeting Expenses .. . | 173 | 9 | 0 | | | | |
| Audit and Accountancy .. . | 94 | 10 | 0 | | | | |
| Queensland Medical Land Investment Co. Ltd.—Interest .. . | 87 | 1 | 0 | | | | |
| Staff Membership Medical Benefits Fund .. . | 35 | 0 | 0 | | | | |
| Repairs to Furniture and Office Equipment .. . | 31 | 16 | 2 | | | | |
| Bancroft Oration Expenses .. | 26 | 17 | 7 | | | | |
| | | | | 9,262 | 17 | 7 | |
| .. Property Expenses: | | | | | | | |
| Cleaning and Gardening .. . | 823 | 14 | 0 | | | | |
| Rates .. . | 400 | 12 | 0 | | | | |
| Repairs and Maintenance .. . | 76 | 9 | 1 | | | | |
| Insurance .. . | 95 | 1 | 9 | | | | |
| State Land Tax .. . | 10 | 5 | 3 | | | | |
| | | | | 1,406 | 2 | 1 | |
| .. General: | | | | | | | |
| Library Expenditure .. | £724 | 18 | 6 | | | | |
| Less Donations .. | £29 | 18 | 0 | | | | |
| | | | | 695 | 0 | 6 | |
| Post-Graduate Grant .. . | 500 | 0 | 0 | | | | |
| Constructing Parking Area and Retaining Wall .. . | 425 | 0 | 7 | | | | |
| Transfer to Staff Gratuity Fund | 262 | 16 | 10 | | | | |
| Purchase of Furniture and Equipment .. . | 43 | 12 | 11 | | | | |
| Purchase of Bancroft Medals .. | 16 | 17 | 6 | | | | |
| | | | | 1,943 | 8 | 4 | |
| .. Balance at Credit: | | | | | | | |
| E.S. and A. Bank Ltd. .. . | 4,166 | 13 | 1 | | | | |
| Cash on Hand .. . | 25 | 0 | 0 | | | | |
| | | | | 4,191 | 13 | 1 | |
| | | | | £23,861 | 17 | 6 | |

Employed Medical and Associate Professions Assurance Fund (Established 1958).

Founder: Dr. Norman Sherwood.

Trustees: Dr. E. W. Abrahams, Professor D. Gordon (chairman), Dr. Keith S. Mowatt.

The purposes of the Fund are:

To make available, particularly to the younger men in the profession, high life assurance cover at a small premium cost.

To permit members of the Medical and Associate Professions Superannuation Plan to transfer their assurance interests in such Plan to the Employed Medical and Associate Professions Assurance Fund without further medical examination, should they cease to remain self-employed.

To permit members in the Employed Medical and Associate Professions Assurance Fund to transfer to the Medical and Associate Professions Superannuation Plan when they become self-employed and without further medical examination.

Membership is increasing, and the Fund is serving a useful purpose to many employed practitioners.

DOUGLAS GORDON,
Chairman of Trustees.

Post-Graduate Medical Education Committee.

The British Medical Association's representatives on the Post-Graduate Medical Education Committee for the year ended June 30, 1961, were: Dr. J. Lee, Dr. K. Mowatt, Dr. G. Anderson (July-December, 1960) and Dr. R. O'Shea (January-June, 1961).

QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION (INCORPORATED).

Revenue Account for Year Ended June 30, 1961.

[illegible]

The Committee's activities for the year were as follows:

Overseas Lecturers: The following visitors to Australia lectured in Brisbane, under the auspices of the Post-Graduate Committee: Professor B. McFarland, Professor of Orthopaedic Surgery, University of Liverpool (Cat. "A" Lecturer, 1960); Professor Leon Israel, Professor of Obstetrics and Gynaecology, University of Pennsylvania; Professor James Dauphinee, Professor of Pathological Chemistry, University of Toronto; Professor Howard Taylor, Professor of Obstetrics and Gynaecology, Columbia University, New York; Dr. Meyer Perlestein, paediatrician, Chicago; Mr. Norman Tanner, surgeon, London; Professor D. W. Young, F.R.S., Professor of Biochemistry, University of Cambridge; Professor D. W. Smithers, Professor of Radiotherapy, University of London; Professor G. M. Wilson, Professor of Pharmacology and Therapeutics, University of Sheffield; Dr. L. G. Kiloh, psychiatrist, Newcastle-upon-Tyne; Dr. F. Dudley Hart, rheumatologist, London; Professor Wilfrid Gaisford, Professor of Child Health and Paediatrics, University of Manchester; Dr. T. N. McGreger, obstetrician and gynaecologist (Sims Black Travelling Professor, 1961); Professor Bradley Patten, Professor of Anatomy, University of Michigan; Professor Douglas Hubble, Professor of Paediatrics and Child Health, University of Birmingham.

Dr. Charlotte Anderson, Royal Children's Hospital, Melbourne, also visited Brisbane, and lectured for the Post-Graduate Committee.

Meehan Memorial Lecture: Dr. G. A. C. Douglas, of Brisbane, delivered the fifth Meehan Memorial Lecture on Friday, December 2, 1960. His subject was "The Treatment of Polymyelic Deformities in the Lower Limb". This lecture was arranged in conjunction with the Queensland Regional Committee of the Australian Orthopaedic Association.

Country Tours: Forty-nine post-graduate lecturers visited 17 country centres during the year. Week-end courses were held at Bundaberg, Nambour, Rockhampton, Mackay and Toowoomba. The Committee granted an additional lecture to Warwick this year, at the request of the newly formed Southern Downs Section of the British Medical Association.

Courses: The advanced medicine course has continued, lectures being held twice a month during the academic year. Attendances have been satisfactory. Anatomy and physiology courses suitable for candidates preparing for the primary F.R.C.S. are being conducted. The numbers enrolled are seven and 24 respectively.

Sponsorship: During the year under review, the Committee granted assistance to 29 doctors proceeding overseas in pursuit of higher degrees. The Secretary was successful in obtaining ships' surgeoncies for 11 doctors.

Colour Television: By courtesy of Messrs. Smith Kline and French Laboratories, a closed-circuit television programme was presented at the Brisbane Hospital in September, 1960, and proved to be highly successful.

Lecture Recordings: During the year, seven lecture recordings were made available to the Committee by the courtesy of Nicholas Pty. Ltd. The Committee's library of disks and tapes continued to be popular with practitioners.

Acknowledgements: The Post-Graduate Committee wishes to express its sincere appreciation to the following: the Department of Health and Home Affairs, for generous financial support; the British Medical Association, for facilities at B.M.A. House and for their annual grant; the North Brisbane Hospitals Board, for use of the hospital flat for visiting lecturers—free of charge; local associations for accommodating post-graduate lecturers; Messrs. Smith Kline and French for making colour television available; and Nicholas Pty. Ltd. for microgroove recordings of lectures.

L. I. MCGUIRE,
Director, Post-Graduate Studies.

Social.

The annual fork dinner, held at Lennon's Hotel, Brisbane, on September 2, 1960, was attended by some 240 members and guests, and was once again a most successful and enjoyable function.

We were delighted to welcome officers of the Parent Body when they visited Queensland in February on their way home from the B.M.A. annual meeting held in Auckland, New Zealand. Dr. and Mrs. Talbot Rogers (chairman of the Representative Body), Professor D. E. C. Mekie (chairman of Overseas Committee) and Mr. W. S. Giles (Financial Comptroller) were guests of the Branch at a dinner held at Lennon's Hotel on February 20, 1961, attended by some 30 members and their wives. This happy occasion was made memorable by the presentation by Dr. Talbot Rogers to our three distinguished colleagues, Dr. H. W. Horn, Dr. A. E. Lee and Dr. J. G. Wagner, of scrolls commemorating their election to the Roll of Fellows of the British Medical Association.

A delegation from the Canadian Medical Association, visiting Australia to observe the operations of our National Health Service, arrived in Brisbane in February, and a programme of visits, interviews and social entertainment was arranged for them.

Other distinguished visitors received at B.M.A. House during the year were: the Commonwealth Director-General of Health, Major-General W. D. Refshauge, and his successor

as D.G.M.S., Armed Forces, Brigadier A. J. Cline; the Repatriation Commissioner, Brigadier F. O. Chilton; the Assistant General Secretary of Federal Council, Dr. C. J. Ross-Smith; and the new Commonwealth Director of Health for Queensland, Dr. A. H. Humphry.

Golf Match.

The annual golf match between members of the Australian Dental Association and the British Medical Association took place at the Indooroopilly Golf Links on October 2, 1960, and resulted in a win for the B.M.A., who thus won the Phillips Cup for the fourth year in succession.

Congratulations.

During the year various honours were conferred upon members of the Branch, who are to be congratulated: Dr. Harold W. Horn, Dr. Alan E. Lee and Dr. John G. Wagner, who were elected to the Roll of Fellows of the British Medical Association; Dr. E. H. Derrick, who was made a Commander of the Order of the British Empire, and also on his appointment as Director of the Queensland Institute of Medical Research; Dr. John J. Power, who was made a Commander of the Order of the British Empire; Dr. Clive W. Uhr, who was made a Commander of the Order of the British Empire; Dr. D. E. Trumpy, who was made a Member of the Order of the British Empire. Also Dr. Ian M. Mackerras, who was awarded the Mueller Medal by the Australian and New Zealand Association for the Advancement of Science.

Conclusion.

This year has been an interesting one for me, and a busy one for your Council and its officers.

Branch Convocations have continued to provide an effective avenue for Council to discuss its problems with local associations and special groups, to our mutual benefit. The further steps which have been taken for the closer organization of the profession in Queensland should prove of inestimable value in the future. Those of our members who participated in the referendum regarding the closure of Ward C5 at the Princess Alexandra Hospital will know that the scheme is both practical and effective. It is pleasing to know that Federal Council is cognizant of this, and has urged all States to adopt similar measures. Convocations, Branch meetings in country centres, the scheme for the organization of the profession and the "Newsbulletin" all assist in Council's policy of endeavouring to ensure that Queensland members are better informed, better organized and therefore more willing and able to voice opinions on the important issues which arise from time to time.

The formation of two new local associations in the Southern Downs and Upper Burnett areas, and of the Visiting Specialists Special Group in North Queensland, are pleasing signs of our growing membership.

Careful investigations into the increasing costs of practice, which were fully discussed with Convocation, enabled Council to approve recommendations for increased fees in general practice with effect from October 1, 1960. Fees for Court appearances have also been reviewed and were discussed with the Queensland Law Society, following which joint representations were made to the Minister for Justice for a review of the fees payable to professional witnesses. An increased scale of fees has recently been gazetted, and we are grateful to the Minister, the Honourable A. W. Munro, and to our legal friends for their help and cooperation in this matter. Details of Council's recommendations will be circulated to members in the near future.

My term of office, as I have already stated, has been full of interest, in spite of considerable responsibility and the constant attention which the office demands. What has been achieved would have been impossible without the loyal assistance of many people, particularly the members of the Council. In addition, I have often sought and received the advice of the Chairman of Council, Dr. Little, and Past Presidents Dr. Hopkins and Dr. McDonnell.

Few realize the time and the effort given to the affairs of the Branch by its Council, a devoted and hard-worked band. This particularly applies to our representatives on the Federal Council, Dr. Robert Miller and Dr. Charles Roe.

I wish to record my appreciation of the work done by the B.M.A. staff, in particular Mr. C. C. Jenkins, our Secretary, and Miss J. Finch, our Assistant Secretary. We are fortunate in having in our service such excellent people.

Finally, I desire to express my appreciation of the splendid relations existing between the Ministry of Health and Home

Affairs and our Association, even though at times our opinions differ. Both the Minister, Dr. Noble, and the Director, Dr. Fryberg, have been ever ready to arrange interviews and discussions. Our relations have never been so cordial.

I now offer my good wishes for a happy and successful year to my friend and my successor in office, Dr. D. A. Dowling.

P. A. EARNSHAW,
President.

BALANCE SHEET AND FINANCIAL STATEMENT.

The balance sheet and financial statement for the year ended June 30, 1961, were presented by the Honorary Treasurer, Dr. W. D. Friend, and adopted.

OFFICE-BEARERS AND COUNCILLORS.¹

It was announced that the following members had been elected office-bearers and councillors for the year 1961-1962:

President: Dr. D. A. Dowling.

Past President: Dr. P. A. Earnshaw.

President-Elect: Dr. N. V. Youngman.

Honorary Secretary: Dr. John F. Lee.

Councillors Elected in 1961: Professor D. Gordon, Dr. B. N. Adsett, Dr. P. W. Hopkins, Dr. L. A. Little, Dr. H. P. Palethorpe, Dr. O. W. Powell, Dr. Charles Roe.

Councillors Elected in 1960 for Two Years: Dr. J. R. Adam, Dr. R. A. McCullagh, Dr. R. Miller, Dr. K. S. Mowatt, Dr. R. F. O'Shea, Dr. H. S. Patterson, Dr. S. A. McDonnell.

THANKS TO RETIRING COUNCILLORS.

On the motion of the President, it was unanimously agreed that the thanks of the Branch to Dr. N. C. Davis, Dr. W. D. Friend and Dr. I. G. McPhee for their past services be recorded.

ETHICS COMMITTEE.

The following members were reappointed to the Ethics Committee of the Branch for the year 1961-1962: Sir Alexander Murphy, Dr. B. N. Adsett, Dr. B. L. W. Clarke, Dr. F. W. R. Lukin, Dr. L. J. J. Nye, Dr. N. L. Sherwood, Dr. W. H. Steel.

AUDITORS.

Messrs. Groom, Sanderson and Company, Chartered Accountants (Aust.), were reappointed auditors for the ensuing year.

ADJOURNMENT.

The meeting then adjourned until 8.30 p.m., when it was resumed in the Great Hall of Brisbane Grammar School: official guests, members and their friends were present.

MEMORIAL ROLL.

The President called upon Dr. Paul W. Hopkins, the immediate Past President, to read the Memorial Roll of Members of the Queensland Branch of the British Medical Association, all present standing.

THE JACKSON LECTURE.

Professor D. Gordon then delivered the thirty-first Jackson Lecture, entitled "Men of Medicine at Separation".

PRESENTATION OF PRIZES.

The following prizes, awarded to medical graduates of the University of Queensland, were presented:

Memorial Prize of the Queensland Branch of the British Medical Association: Dr. Alan Kenneth Laws.

Harold Plant Memorial Prize: Dr. Marshall Thomas Osborne.

INDUCTION OF PRESIDENT.

The retiring President then introduced the incoming President, Dr. D. A. Dowling, and installed him in the presidential chair.

PRESIDENT'S ADDRESS.

The incoming President, Dr. D. A. Dowling, then delivered his presidential address (see page 897).

¹ Dr. L. A. Little has since been elected Chairman of the Council, and Dr. S. A. McDonnell Honorary Treasurer of the Branch.

from ev
become
facts of
Duggan
sufferin
days a
hemorrh
Nurse
purpur
extensiv
next da
mailed
sickened
in the
local Bo
by the
were fo
hospital
cases ha
of May,
with th
cases ha
Mowbray
Launcest
to be tr

Sir: Th
of goodw
there are
for whom
Therefore
response
Associati

British
135 M
Syd
Novemb

Sir: Y
Retrospect
limitations
education.
enunciated
contention
with prepa
logical pr
health aut
the servic
preparation
In Victo
fully selec
have rece
principles
possible by
in our Ed
been train

Out of the Past.

THE OUTBREAK OF SMALLPOX AT LAUNCESTON.¹

[From the *Australasian Medical Gazette*, August 20, 1903.]

The chief topic in Tasmania at present is smallpox, and from every point of view the subject is discussed until one becomes thoroughly tired of smallpox gossip. The main facts of the epidemic are as follows: On June 3 a man named Duggan was admitted to the Launceston General Hospital suffering with a thick measles-like rash, and died three days after his admission from what was regarded as hæmorrhagic scarlet-fever. Thirteen days after his admission, Nurse Cash, who had nursed him, developed a severe purpuric rash and died on the third day, there being extensive mucous and subcutaneous hæmorrhage. In the next day or two another nurse, two porters, and a laundry maid took ill, then a few days later the house surgeon sickened. On June 22 the Mayor heard that smallpox was in the city, although no notification had been made to the local Board of Health, and on enquiry then being made by the Medical Officer of Health, Dr. Wilson, several cases were found in and around Margaret-street and also in the hospital. Further enquiry revealed the fact that suspicious cases had been occurring in the town as early as the end of May, and that convalescents had been walking about with the scabs still on their faces. Since then some 40 cases had developed in town, as well as at Lefroy, 30 miles, Mowbray, and Ravenswood, three miles distant from Launceston. All these cases, it is satisfactory to know, are to be traced to direct contact with town or hospital cases.

Correspondence.

THE MEDICAL BENEVOLENT ASSOCIATION OF N.S.W.: CHRISTMAS APPEAL.

Sir: The approach of Christmas with its traditional spirit of goodwill and the giving of gifts should remind us that there are some of our medical fraternity, and their children, for whom this season may not be one of happiness. Therefore, may I, through your Journal, request a generous response to the Christmas Appeal of The Medical Benevolent Association of New South Wales?

Yours, etc.,

ERIC A. TIXEY,
President, The Medical Benevolent Association of N.S.W.

British Medical Association House,
135 Macquarie Street,
Sydney.

November 14, 1961.

NATIONAL HEALTH WEEK IN RETROSPECT.

Sir: Your leading article "National Health Week in Retrospect" in the October 28 Journal, clearly indicates the limitations of Health Week as an effective form of health education. Whilst agreeing with the general principles enunciated in your article, I must vigorously contest your contention: "So far as we know, health education officers with preparation and experience in educational and psychological principles of learning are not employed by any health authority in Australia, and it is highly unlikely that the services of such people are available to aid in the preparation of National Health Week programmes."

In Victoria we have in our School Medical Service a carefully selected group of doctors who, over a period of years, have received extensive training and experience in the principles and practice of education. This has been made possible by the willing cooperation of senior educationalists in our Education Department. As well, these doctors have been trained in the modern concepts of health and disease

considered from an ecological and ætiological viewpoint. Special attention has also been given to the mental health aspects of man's interaction with his environment under the guidance of an experienced psychiatrist attached to the School Medical Service.

In these ways an attempt has been made to prepare these doctors to be effective health educators at the community, group and personal levels. Their services are naturally available to aid in the preparation of Health Week programmes, but for reasons given in your article not much emphasis is given to Health Week as such in our health education programme in Victoria. Rather we take the view that their most effective contribution is in teachers' colleges, as in the field of applying a health education programme to the public the position of the school-teacher is almost unique. The teacher through his vocation can exert a profound influence on the habits and attitudes of his pupils, and indirectly through them may influence the attitudes of their parents. Recognizing this, the Victorian Health Department, operating through the School Medical Service, is striving to utilize to the full the opportunities which are available. Accordingly extensive courses in health and opportunities for medical counselling and staff discussion are now given in teachers' colleges, and this work is continuing to expand and develop. Its value in this developmental stage can only be gauged by the increasing importance it is acquiring in teacher training and the favourable and appreciative views expressed by the senior educationalists who are responsible for teacher training, and the views of the teachers in training.

Yours, etc.,

BERTRAM P. MCCLOSKEY,
Assistant Chief Health Officer
(Child Health).

Maternal and Child Welfare Branch,
Department of Health,
278 Queen Street,
Melbourne.

November 9, 1961.

THE AUSTRALIAN MEDICAL ASSOCIATION.

Sir: I have recently attended an extraordinary meeting of the B.M.A. (Queensland Branch), relating to the change over to the Australian Medical Association. I have felt that this thing has been foisted upon us, but on reading my Journal, we are told it is not so. We had our chance to air our views in the correspondence columns of the Journal. That may be so. You wait for someone more able to make a move. He does not, and it is too late.

I have been a member of the B.M.A. all my doctoring days, and have always been very proud of it. We are not any better Australians for discarding something British. I do not think the new organization will be so efficient. It appears to be too top heavy, and the voice of that fast vanishing race, the family doctor, will less likely be heard. It seems that the best way to exercise our democratic rights is to write to the Journal.

Some people are not very happy about the proposed expensive Assembly in Adelaide next year. I hope someone ups and writes to the Journal about that one. Now in the old B.M.A. days, there was no fuss. A Federal Council meeting would be held in a Capital city, and the work accomplished quietly, efficiently and relatively cheaply. Those days are gone for ever.

When the official take-over does take place, I hope some recognition will be given to the B.M.A. and its work in Australia, and not just shown the door as some poor relation. I do not know when it started in Australia, but its record is impressive. With a distinct Australian flavour, and so far as I know, without a blot on its escutcheon, it has steered us through some troubled waters. The Council cannot refer everything back to members, but in an important matter such as this change-over we should have had the opportunity of voting. There is always a loyal core of members, who like Gideon's three hundred, lap the water, or at any rate vote when asked, read their Journals, etc. They were ignored on this occasion.

Yours, etc.,

H. W. ANDERSON
(ex-B.M.A. member).

715 Sandgate Road,
Clayfield,
Queensland.
November 19, 1961.

¹ From the original in the Mitchell Library, Sydney.

Post-Graduate Work.

POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

PROGRAMME FOR 1962.

THE Post-Graduate Committee in Medicine in the University of Sydney announces the following programme for 1962.

Metropolitan Courses.

The following metropolitan courses will be given: March 10 and 11, neurology;¹ March 17 and 18, electrocardiography;¹ March 24 and 25, cardio-pulmonary diseases;¹ April 2 to 13, general revision course; April 9 to 13, Sydney Hospital refresher week; June 6, 13, 20 and 27, evening seminars, cardio-vascular diseases;¹ June 9 and 10, rheumatic diseases;¹ July-August, liver diseases (two afternoons per week);¹ July 6, cardio-vascular collapse;¹ July 7 and 8, gastroenterology;¹ July 23 to August 10, occupational health; July 28 and 29, pediatrics;¹ August 15, 22 and 29 and September 5, evening seminars—endocrinology and diabetes;¹ August, "Reunion Week", Royal North Shore Hospital of Sydney; August, "Reunion Week", Royal Prince Alfred Hospital; August 27 to 31, gynaecology and obstetrics, The Women's Hospital, Crown Street; September 8 and 9, renal diseases;¹ September 15 and 16, cardio-pulmonary diseases (St. Vincent's Hospital);¹ September, "Reunion Week", St. Vincent's Hospital; October 6 and 7, recent advances in cardio-vascular diseases, 1962;¹ November 19 to 30, anaesthetics, Sydney Hospital (limited—closing date June 30).

Arrangements are in hand to include courses in the following subjects (details have still to be confirmed and will be announced at a later date): clinical respiratory physiology, in the period May to July (two afternoons per week);¹ evening seminars in neurology (Northcott Neurological Centre), in the period April to June;¹ obstetrics and gynaecology, Royal Hospital for Women (March), to coincide with the visit of Dr. J. P. Greenhill of Chicago; medical disasters; practical use of television equipment for medical educational purposes; isotopes; cancer detection for pathologists; cancer detection for general practitioners; cancer symposia on selected topics; reading techniques;¹ medical writing.¹

Correspondence Courses.

The following correspondence courses will be conducted.

Electrocardiography (University of Southern California):¹ (a) Basic course, consisting of 52 weekly lessons. Each lesson is exemplified by electrocardiographic tracings, together with "unknown" electrocardiograms, the interpretation of which is dealt with in subsequent lessons. The fee is 40 guineas. (b) Advanced course, following on from the basic course. There will be 52 weekly lessons, each comprising six unknown tracings with clinical histories, plus detailed description, interpretation and explanation of the previous week's unknown tracings. The fee is 40 guineas.

Hæmatology (University of Kansas Medical Centre):¹ This course consists of nine monthly lessons, designed to present the most frequently observed hæmatological disorders. Course materials include 65 coloured photomicrographs (35 mm.) of blood and bone-marrow preparations. The fee is 20 guineas.

Training in Advanced Medicine.

An intensive full-time course in advanced medicine will be held from February 19 to March 23, in conjunction with the Department of Medicine, University of Sydney. For those seeking a more leisurely preparation, a series of courses is available throughout the year. These are indicated by the footnote in the foregoing section and can be supplemented by special arrangements, details of which are available on application.

Resident and External Training Facilities.

Anæsthetics: Facilities for resident and external post-graduate training in anæsthetics are available at the following hospitals. Board and residence fees quoted below are subject to fluctuation. (a) Royal Prince Alfred Hospital: for minimum periods of two weeks, February to November inclusive. Fees per week are £8 8s., including board and residence, or £3 3s. for external attendance. (b) The Prince

Henry Hospital: throughout the year. Fees per week are £7 2s., including board and residence, or £3 3s. for external attendance. (c) Lewisham Hospital: a limited number of residencies only, available for a minimum period of three weeks. Fees, including board and residence, are £6 6s. per week. Lewisham Hospital reserves the right to select candidates. No resident facilities are available for women.

Gynaecology and Obstetrics: Post-graduate residencies are available at the following hospitals: (a) The Women's Hospital, Crown Street: fee, including board and residence, £5 15s. 6d. (b) The Royal Hospital for Women, Paddington: fee, including board and residence, £6 19s. 7d. per week.

Pædiatrics: Post-graduate residencies are available at the Royal Alexandra Hospital for Children, Camperdown. Fee, including board and residence, £7 2s. 10d. per week.

General Residencies: Post-Graduate residencies are available for women graduates at the Rachel Forster Hospital for Women and Children, Redfern. Fee, including board and residence, £6 6s. per week.

Accommodation: Limited accommodation at The Royal Hospital for Women is available for post-graduates attending courses in Sydney. Board and residence amount to £3 16s. 7d. per week, and all applications should be directed to the Post-Graduate Committee.

External Studies: Arrangements can be made with due notice to meet the individual needs of medical practitioners requiring *à-la-carte* courses. Fees are £1 1s. per session attended, with a maximum fee of £3 3s. per week.

Blood Grouping and Transfusion: On application to the Committee, instruction in the technique of blood grouping and transfusion can be arranged, free of charge, at the Red Cross Blood Transfusion Service or at The Royal Newcastle Hospital.

Post-Mortem Examinations: On application to the Committee, instruction in the technique of the performance of post-mortem examinations can be arranged free of charge.

Week-End Conferences, Country Centres.

The following country week-end conferences will be held: March, Armidale; April 14, Newcastle (gynaecology and obstetrics); April 28 and 29, Bathurst; April 14 and 15, Wagga Wagga; June 2 and 3, Broken Hill; June 23 and 24, Katoomba; June 30 and July 1, Hornsby; July 14 and 15, Wollongong; August 11, Newcastle (medicine); September 22 and 23, Coff's Harbour; October 20 and 21, Parramatta; October 27, Newcastle (surgery); November 3 and 4, Young; November 17 and 18, Albury.

Diploma Courses.

The following diploma courses will be held: February 12, primary F.R.A.C.S. and F.F.A.R.A.C.S. begin (six months), closing date December 20, 1961;² February 19, advanced medicine begins (5 weeks); March 5, advanced surgery begins (7 weeks), closing date February 2;² March 12, D.A. II and Final F.F.A.R.C.S. begin (2 weeks); March 12, D.D.R. I begins (4 months); March 12, D.T.R. I begins (4 months); May 7, D.D.M. I begins (12 weeks); June 5, D.P.M. I begins (8 months); July 16, D.P.M. II begins (7 months); July 16, D.D.R. II begins (8 months); July 16, D.T.R. II begins (8 months); August 6, D.D.M. II begins (7 months); August 27, D.A. I begins (11 weeks); August 27, D.G.O. I begins (11 weeks); August 27, D.L.O. I begins (11 weeks); August 27, D.O. I begins (11 weeks); September 17, D.C.P. Group II begins (6 months); September 17, D.C.P. Group III begins (6 months); November 12, D.G.O. II begins (3 months); November 12, D.L.O. II begins (3 months); November 12, D.O. II begins (3 months).

Annual Subscription Course.

This course covers attendance at lectures by overseas lecturers and other specially arranged activities. The annual fee is £3 3s. from July 1, 1962. The fee for first-year and second-year resident medical officers is £1 11s. 6d. A detailed diary card is printed at regular intervals throughout the year and posted to members. Occasionally last-minute alterations to meetings are necessary, and these are notified by advertisement in *The Sydney Morning Herald* ("Public Notices"), if possible on the day before the meeting.

²Arranged by New South Wales State Committee of the Royal Australasian College of Surgeons.

³Arranged by New South Wales State Committee of the Royal Australasian College of Surgeons in conjunction with Department of Surgery, University of Sydney.

¹ Courses suitable for M.R.A.C.P. examinations.

OVERSEAS BUREAU.

The Committee maintains an Overseas Bureau to assist medical practitioners proceeding abroad. A fee of £2 2s. is made for this service. Advice can be given concerning courses, accommodation, qualification for registration and other matters.

ANCILLARY EDUCATIONAL SERVICES.

Bulletin of the Post-Graduate Committee in Medicine, University of Sydney.—The annual subscription to the Committee's monthly Bulletin is £2 2s.

Film-Lending Service.—The New South Wales Film Council, 55 Market Street, Sydney, handles the Committee's film collection. Borrowers must first be registered with the Committee, after which they may apply direct for individual films to the Council. A film catalogue containing details and appraisals of medical films available may be purchased from the Committee at a cost of £2 2s.

Library Bulletin.—The Library Bulletin of the Post-graduate Medical School of London lists authors and titles of papers in some 360 journals in medicine and surgery and their specialties and basic medical sciences. The subscription is £3 3s. per annum.

Lecture Recordings.—Recorded lectures are available for loan, free of charge, to medical practitioners and groups.

Tape Collection.—A collection of tape recordings, especially directed towards the general practitioner, has been established through the courtesy of E. R. Squibb and Sons. These recordings are available for loan, free of all charges except postage.

DAILY MEDICAL NEWS SERVICE.

On dialling 31-8354, the medical news service gives details of daily programmes, other post-graduate activities and important medical news. The service is available 24 hours a day.

TAXATION DEDUCTIONS.

A deduction may be claimed in respect of fees paid for attendance on general practitioner courses held under the Committee's auspices when such fees are paid by practitioners who are in practice. Travelling expenses incurred in attending such courses may also be claimed as a deduction.

When claiming, it will be necessary to quote "Taxation File No. AF/1865".

GENERAL.

Dates of all courses should be confirmed with the Post-Graduate Committee, from which further details regarding fees, diploma regulations and other information may be obtained. Fees quoted are subject to alteration at any time during the year, at the discretion of the Committee.

THE AUSTRALIAN POST-GRADUATE FEDERATION IN MEDICINE.

Upjohn Grants for General Practitioners' Post-Graduate Study, 1962.

The Australian Post-Graduate Federation in Medicine announces that Upjohn Pty. Ltd. have made available to the Federation through the Post-Graduate Medical Foundation of the University of Sydney 20 grants of £100 each to general practitioners registered in any State or Territory in Australia and New Zealand, to assist them to attend approved full-time courses of at least one week's duration in Sydney, Melbourne, Adelaide or Brisbane. A list of approved courses will shortly be announced.

Application forms, conditions, list of courses and further particulars may be obtained from the Secretary, Australian Post-Graduate Federation in Medicine, Herford House, 188 Oxford Street, Paddington, New South Wales. Applications for the above-mentioned grants close on Wednesday, February 28, 1962.

Notes and News.

Henry Simpson Newland Prize in Surgery.

Essays may still be submitted for the Henry Simpson Newland Prize in Surgery, 1962. The subject is "The Modern Management of Inflammatory and Neoplastic Diseases of

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED NOVEMBER 11, 1961.¹

| Disease. | New South Wales. | Victoria. | Queensland. | South Australia. | Western Australia. | Tasmania. | Northern Territory. | Australian Capital Territory. | Australia. |
|--------------------------------------|------------------|-----------|-------------|------------------|--------------------|-----------|---------------------|-------------------------------|------------|
| Acute Rheumatism | 1(1) | 3(1) | 2 | .. | .. | .. | .. | .. | 6 |
| Amoebiasis | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Ancylostomiasis | .. | .. | .. | .. | .. | .. | 8 | .. | 8 |
| Anthrax | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Brucellosis | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cholera | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Chorea (St. Vitus) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Dengue | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Diarrhoea (Infantile) | 1 | 18(15) | 4(1) | .. | .. | .. | 1 | .. | 24 |
| Diphtheria | .. | 1(1) | .. | .. | .. | .. | .. | .. | 1 |
| Dysentery (Bacillary) | .. | 1(1) | .. | .. | 5(5) | .. | 1 | .. | 7 |
| Encephalitis | .. | .. | 1 | .. | .. | .. | .. | .. | 1 |
| Filariae | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Homologous Serum Jaundice | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Hydatid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Infective Hepatitis | 147(79) | 99(50) | 48(25) | 28(9) | 3(2) | 9(4) | .. | 6 | 340 |
| Lead Poisoning | .. | .. | 1(1) | .. | .. | .. | .. | .. | 1 |
| Leprosy | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Leptospirosis | .. | .. | 2(1) | .. | .. | .. | .. | .. | 2 |
| Malaria | .. | .. | 3(3) | .. | .. | .. | .. | .. | 3 |
| Meningococcal Infection | 2 | 1 | .. | .. | 1 | .. | .. | .. | 4 |
| Ophthalmia | .. | .. | .. | .. | 6 | .. | .. | .. | 6 |
| Ornithosis | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Paratyphoid | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Plague | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Poliomyelitis | 7 | 1(1) | 3(2) | .. | .. | .. | .. | .. | 11 |
| Pyrexial Fever | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Rubella | .. | 19(10) | 4 | 1(1) | 2(2) | .. | .. | 1 | 27 |
| Salmonella Infection | .. | .. | .. | .. | 4(4) | .. | .. | .. | 4 |
| Scarlet Fever | 3(2) | 9(4) | .. | 1(1) | 2(2) | .. | 1 | .. | 14 |
| Smallpox | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tetanus | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Trachoma | .. | .. | .. | .. | 4 | .. | .. | .. | 4 |
| Trichinosis | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tuberculosis | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Typhoid Fever | 36(27) | 12(7) | 8(4) | 4(3) | 6(2) | 3(1) | 1 | .. | 70 |
| Typhus (Flea-, Mite- and Tick-borne) | .. | .. | .. | .. | 2(1) | .. | .. | .. | 2 |
| Typhus (Louse-borne) | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Yellow Fever | .. | .. | .. | .. | .. | .. | .. | .. | .. |

¹ Figures in parentheses are those for the metropolitan area.

the Left Colon and Rectum". The amount of the prize is £100. Entries, which close on January 15, 1962, should be submitted to the General Secretary, Federal Council of the British Medical Association in Australia, 135 Macquarie Street, Sydney, from whom further particulars are available.

International Conference on Health and Health Education.

The International Union for Health Education, by invitation of the American National Council for Health Education of the Public and in collaboration with the World Health Organization, announces that the fifth International Conference on Health and Health Education will be held on June 30 to July 7, 1962, at Philadelphia, Pennsylvania. The broad theme of the Conference will be "Man in his Environment", and participants will include physicians, health education specialists, experts in environmental sanitation, nursing, etc., social scientists, and leaders in education, social work and other professions. The languages used will be English, French, Spanish and Russian, and simultaneous translation will be available. Applications for advance registration close on April 1, 1962. Further information may be obtained from the Conference Secretariat, 1962 International Conference on Health and Health Education, 800 Second Avenue, New York 17, New York, U.S.A.

The Fleming Memorial Fund for Medical Research.

A fund has been set up in London to commemorate Sir Alexander Fleming. It is to be known as the Fleming Memorial Fund for Medical Research. The aims of the fund are to advance and expand basic medical research designed to elucidate the causes of disease and assist in its prevention and cure. It will be administered by a board of seven trustees under the chairmanship of Lord Heyworth. The committee promoting the fund is appealing for the sum of £1,000,000 and invites contributions. They should be sent to the Fleming Memorial Fund for Medical Research, 26 Upper Brook Street, London, W.1.

Nominations and Elections.

THE undermentioned has applied for election as a member of the New South Wales Branch of the British Medical Association:

Gerzner, Leopold Franz Josef, M.D., 1936 (Univ. Vienna), licensed under Section 21c (3), *Medical Practitioners Act*, 1938 (as amended), Mead Street, Bulahdelah.

The undermentioned have been elected as members of the New South Wales Branch of the British Medical Association:

Basil, William, M.B., B.S., 1961 (Univ. Sydney); Benjamin, Bruce Neil Proctor, M.B., B.S., 1956 (Univ. Sydney); Dalton, Vincent Cletus, M.B., B.S., 1959 (Univ. Sydney); Endre, Andrew Joseph Zoltan, M.D., 1934 (Univ. Budapest), registered under Section 17 (2b), *Medical Practitioners Act*, 1938 (as amended); Forrest, Jill Mary Susan, M.B., B.S., 1961 (Univ. Sydney); Ingham, Donald Charles, M.B., Ch.B., 1956 (Univ. Edinburgh); Smith, Robert Darlow, M.B., B.S., 1952 (Univ. Sydney), F.R.C.S. (England), 1956, F.R.C.S. (Edinburgh), 1956, F.R.A.C.S., 1959; Wark, Marian Lynette, M.B., B.S., 1959 (Univ. Sydney); McMahon, Ruth Margaret, M.B., B.S., 1961 (Univ. Sydney); Thompson, Patrick, M.B., B.S., 1960 (Univ. Sydney); Mackinnon, Ronald Marius, M.B., B.S., 1959 (Univ. Sydney); Menser, Margaret Anne, M.B., B.S., 1961 (Univ. Sydney); Uren, David Henry, M.B., B.S., 1961 (Univ. Sydney).

Deaths.

THE following deaths have been announced:

O'NEILL.—Sydney O'Neill, on November 14, 1961, at Lewisham, N.S.W.

TAYLOR.—John Russell Robert Taylor, on November 15, 1961, at Melbourne.

FRANCIS.—Harry Vivian Francis, on November 20, 1961, at Melbourne.

WALTON-SMITH.—Percy Edward Walton-Smith, on November 22, 1961, at Bondi Junction, N.S.W.

Diary for the Month.

- DECEMBER 5.—New South Wales Branch, B.M.A.: Organization and Science Committee, 8 p.m. (with Special Groups, 8.30 p.m.).
- DECEMBER 6.—New South Wales Branch, B.M.A.: Public Relations Committee.
- DECEMBER 6.—Victorian Branch, B.M.A.: Branch Meeting.
- DECEMBER 6.—Victorian Branch, B.M.A.: Branch Council Meeting.
- DECEMBER 6.—Western Australian Branch, B.M.A.: Branch Council Meeting.
- DECEMBER 7.—South Australian Branch, B.M.A.: Council Meeting.
- DECEMBER 7.—New South Wales Branch, B.M.A.: Clinical Meeting.
- DECEMBER 8.—Queensland Branch, B.M.A.: Council Meeting.
- DECEMBER 11.—Victorian Branch, B.M.A.: Executive Meeting of Branch Council.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney): Medical Officers to Sydney City Council. All contract practice appointments in New South Wales. Members are requested to consult the Medical Secretary before undertaking practice in dwellings owned by the Housing Commission.

South Australian Branch (Honorary Secretary, 80 Brougham Place, North Adelaide): All contract practice appointments in South Australia.

Editorial Notices.

ALL articles submitted for publication in this Journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations, other than those normally used by the Journal, and not to underline either words or phrases.

Authors of papers are asked to state for inclusion in the title their principal qualifications as well as their relevant appointment and/or the unit, hospital or department from which the paper comes.

References to articles and books should be carefully checked. In a reference to an article in a journal the following information should be given: surname of author, initials of author, year, full title of article, name of journal, volume, number of first page of article. In a reference to a book the following information should be given: surname of author, initials of author, year of publication, full title of book, publisher, place of publication, page number (where relevant). The abbreviations used for the titles of journals are those of the list known as "World Medical Periodicals" (published by the World Medical Association). If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full data in each instance.

Authors submitting illustrations are asked, if possible, to provide the originals (not photographic copies) of line drawings, graphs and diagrams, and prints from the original negatives of photomicrographs. Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary is stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: 68-2651-2-3.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this Journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such notification is received within one month.

SUBSCRIPTION RATES.—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in Australia can become subscribers to the Journal by applying to the Manager or through the usual agents and booksellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rate is £6 per annum within Australia and the British Commonwealth of Nations, and £7 10s. per annum within America and foreign countries, payable in advance.